Successful Farming

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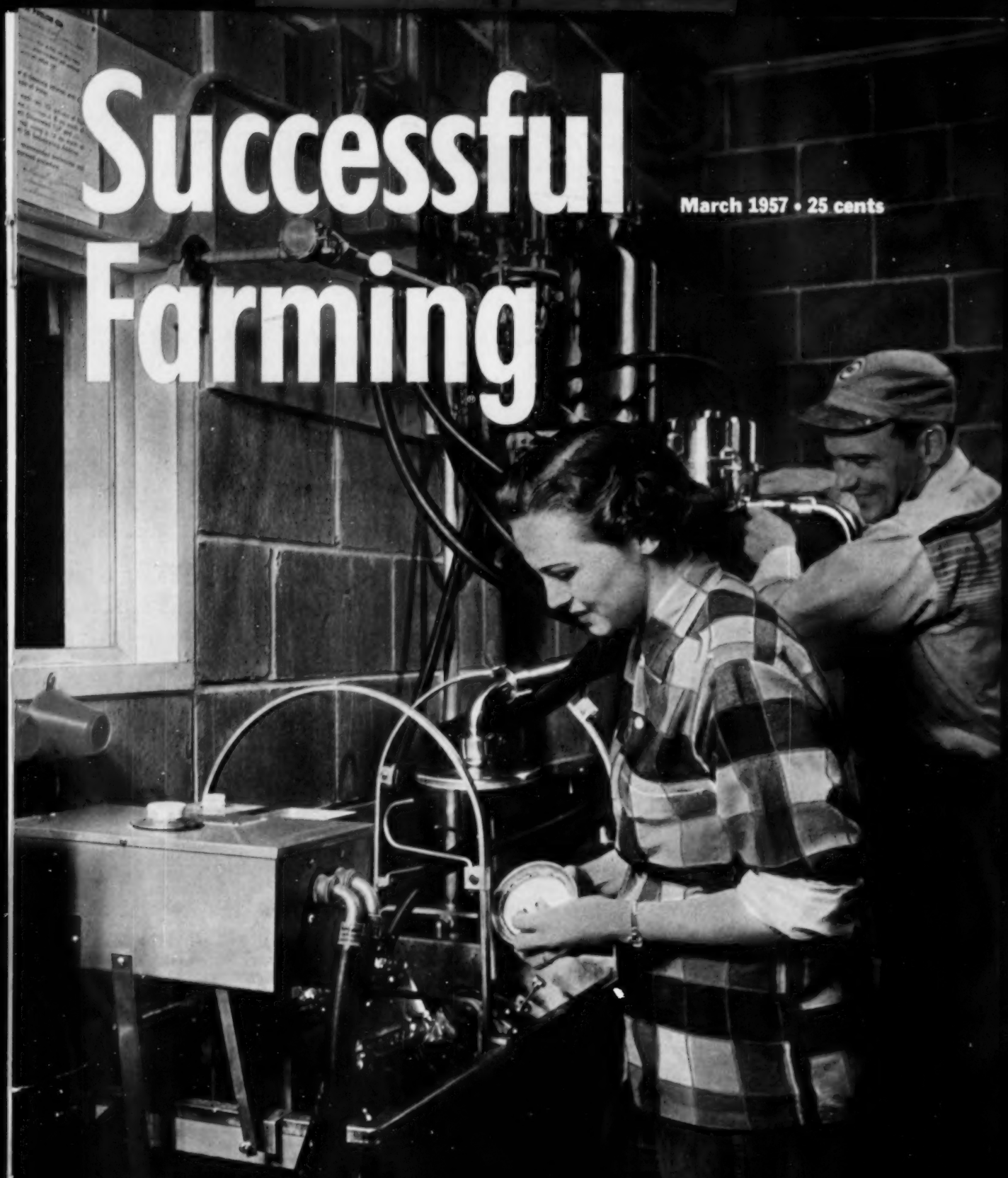

Jim Fisk farm
Whiteside County, Illinois

In this issue:

LATEST RESEARCH ON QUALITY FORAGE

NEW IN THE YEARS-AHEAD UNI-FARMOR FAMILY . . .

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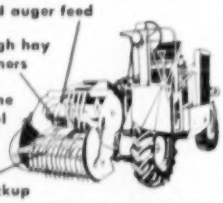

Now, the same basic machine that gives you self-propelled windrowing, forage chopping, combining, corn picking, or corn picking-shelling, does your hay baling, too, to make MM Uni-Farming a still *better* way to farm! The all-new Uni-Balor for the champion Minneapolis-Moline Uni-Farmor takes this self-propelled system a big, new step ahead!

Uni-Farmor machines save you up to $1500 when you buy, save you money every time you add a Uni-Machine because every machine mounts on the same Uni-Tractor. And, when you Uni-Farm, you profit by all the champion advantages that have made the Uni-Farmor overwhelming winner in three straight major corn competitions.

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UNI-WINDROWER—Open fields anywhere, cut hay or grain as crops ripen. Big, 10-foot capacity with hydraulic height control and constant cutting speed.

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and about half the price of other self-propelleds!

UNI-HUSKOR—The champion corn picker, in major competition and in your corn! Offers MM's exclusive husking bed with rotating and side-to-side action.

UNI-PICKER-SHELLER—Picks and shells corn with up to 30% moisture content in one trip through! You get the picking advantages of the Uni-Huskor and MM Shelling, too.

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MINNEAPOLIS 1, MINNESOTA

ONLY LOW-PRICE TRUCK TIRE BUILT WITH *TRIPLE-TOUGH* 3-T CORD!

TRIPLE-TOUGH 3-T CORD LICKS THE 3 GREAT TRUCK TIRE KILLERS!

New RIB HI-MILER licks Heat, Shock and Fatigue for dependable low-cost service!

To *really* save you money, even the lowest-cost truck tire must deliver long, dependable, original mileage – and more recaps.

And that's why Goodyear's new Rib Hi-Miler simply can't be matched for the price!

It's built with TRIPLE-TOUGH 3-T CORD – the *exclusive* Goodyear TRIPLE-TEMPERED CORD that fights off HEAT–the SHOCK of bumps and bangs–the FATIGUE of hard service –as no lesser cord can do.

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You can start these *real* savings – these continuing savings – right now. Simply see any Goodyear dealer. Goodyear, Truck Tire Dept., Akron 16, Ohio.

only $19.95

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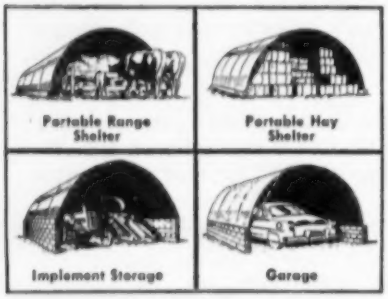

Smaller Size for Hog Shelter
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Successful Farming®

March, 1957
Vol. 55, No. 3

THE MAGAZINE OF FARM BUSINESS AND FARM HOMES

Management and Business

The farmer's Washington 16
Friend to friend 20
Your neighbors say 32
Helping farmers gain their fair share of national income 55
How we're managing to make money dairying 84
Equipment for farm business center 128
These hog raisers find orderly marketing pays 143

Herds, Flocks, Crops

Soils and crops 6
Beef 8
Hogs 10
Dairy 13
Poultry 14
How do you buy nitrogen? 25
You can apply liquid fertilizer 26
"I switched to multiple farrowing" 56
Quality forage 60
Where do you put starter fertilizer? 64
Good beef bulls are getting around 68
Sheep—his top moneymaker 115
How to cut losses from breeding troubles 153
Handling anhydrous ammonia 156
Two systems for testing hogs 180
Testing—not guessing—bull fertility 188
Veterinary helps 192

Building and Machinery

Portable livestock equipment 43
What's new in farming 52
How to cut machinery costs 70
Over-roof with wood shingles 110
Successful shortcuts 126
Triple-duty barn 150
They built a farrowing house for the future 168
How to find field tile 174
To control fire choose best tool 176
Double-use machine shed 186
All around the farm 200

Successful Homemaking

What's new in homemaking 38
New furniture features good design 58
Laundry center for the kitchen 66
Room dividers 67
Kitchens designed with children in mind 72
Rice main dishes 77
Seafood specials 78
Family dining room was porch 92
Tips for the cook 100
Good furniture arrangement 108
For teen-age cooks 124
Cooking under cover 130
Easier vacuum cleaning 134
New summer furniture 140
Potatoes are their business 146
All around the house 178
Good buys for few dollars 194

Family Life and Fun

Improvised games 164
Laughing at life 172

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How to build lifelong security in 10 short years!

Life insurance that becomes fully paid up in 10 years protects you and your family until you retire—then pays you a lifetime retirement income.

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SOILS AND CROPS

WHAT'S NEW

New menace to soybeans

The soybean cyst nematode, a tiny organism that lives in the roots of the soybean plant, has been discovered in Tennessee and in the Missouri boot heel.

Symptoms are yellowing of the plant and dwarfing. It can ruin an entire crop if allowed to build up a large population. Until the total extent of the infestation is determined, it is impossible to gauge the impact on the nation's bean production.

As yet there's no known method for complete control of the cyst nematode. However, rotations are effective in cutting their population and reducing crop losses. Plan to put beans on the same field not over once every 3 or 4 years.

Heavy hopper infestation forecast

If you're living in Midwest states from Oklahoma to Minnesota and eastward to the Mississippi River, you may have grasshopper problems in '57. Entomologists who have completed extensive surveys report that only cool, rainy weather will prevent serious grasshopper outbreaks over much of this area.

Consider alfalfa aphid problem

Think twice before putting *all* new seedings down as alfalfa. Agronomists say seedings may suffer severe damage in many alfalfa-growing areas during the coming season if invasion of the alfalfa aphid continues. Consider substituting a portion of your seeding with other legumes adapted to your area until this insect is off the rampage.

Planning to irrigate?

Farmers planning to use irrigation this year will realize maximum returns only if fields are adequately fertilized, say Purdue University extension agronomists.

Soil samples should be taken from all fields to be irrigated. Moisture is only one of the limiting factors in crop production.

OUTLOOK

Don't sell your wheat short

Farm stocks are the smallest in 15 years, and the new crop will be below last year's. Add to this the prospects for larger exports, and you come up with a strong price position.

Play soybean market close to the belt

U.S.D.A.'s January 1 report on stocks reveals farmers holding a record 169 million bushels—up 45 percent from last year. Conclusion is that everybody with beans is speculating.

Experts are divided on the price trend. Some say there are too many beans on farms for a price rise. Could be, but if you've got the storage or have a U.S.D.A. loan—you may still squeeze a better profit by holding.

WATCH THE MARKET: If prices begin to tumble—hold on. It means many farmers are selling, and after the rush a new price rise is likely. Point to remember is that *exports are going up and so is the crush.*

Demand is good for feed grains

Farm stocks are big, but below last year's, and a lot more corn is being sealed. This strengthens prices outside the loan. The government's planting-intentions report later this month will give you a line on upcoming supply for 1957-58.

Photograph: Suter, Hedrich-Blessing

On the cover

Prophetstown, Illinois—Cleaned-in-place pipelines and milking machines have made dairying a lot easier for the Jim Fisks. They operate a 370-acre Grade A dairy farm near here. At present they are milking 52 head.

Water, automatically forced through the system, has taken over the job of rinsing, cleaning, and sanitizing. Equipment is rinsed and cleaned immediately after milking. The lines are flushed with a sanitizer just before the next milking. The entire operation is automatically controlled.

Mrs. Fisk is shown with her husband helping to ready unit for cleaning.

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To the farmers of Mid-America:

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. . . prevents clogging in fuel systems

STANDARD RED CROWN Gasoline now contains an amazing and exclusive new additive that prevents corrosion on all types of metals. It coats metal surfaces with an invisible protective film so that moisture can't get at them. This means:

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Get set for Spring work, now, with a fill of *new* STANDARD RED CROWN Gasoline. Your Standard Oil Man can also check your storage tank for any buildup of moisture from condensation—no cost or obligation. Call him today!

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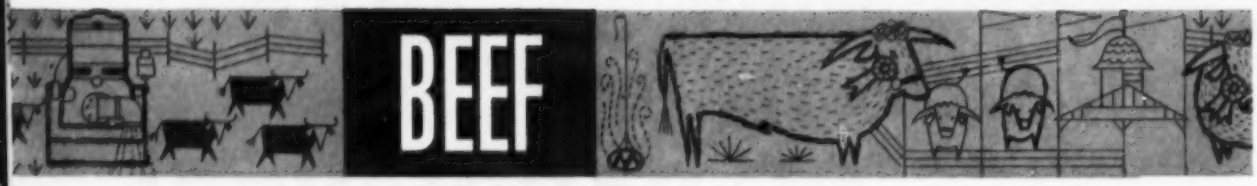


WHAT'S NEW

Treat 'em with sweets

Feed manufacturers say you can. They've come up with the idea of treating cattle for internal parasites by mixing phenothiazine with molasses or similar highly palatable compounds. A variety of liquid, dry, and pelleted forms is available.

Biuret as nitrogen source?

Biuret, a nitrogen compound, may soon be added as an excellent source of dietary nitrogen for sheep and cattle. Preliminary work by University of Illinois researchers indicates it is less toxic than urea, and its lower solubility will likely have less effect on palatability. More experiments are needed.

Antibiotics for mucosal diseases

The use of greater amounts of antibiotics in treatment of mucosal diseases in cattle is now being recommended—staggering losses have been caused by these diseases in the past 3 years in United States and in Canadian feedlot areas. The 5 types of the disease are: rhinotracheitis, malignant catarrhal fever, Iowa mucosal disease, virus diarrhea, and infectious stomatitis—several are often active at the same time in an animal. Treatment with direct application of antibiotics in combination with enzymes is producing good results.

Stress causes dark beef

Animals under a lot of stress before slaughtering can produce dark-cutting beef, according to University of Missouri experiments. Cattle used in tests were excited many times over a 24-hour period with use of an electric hot-shot. They showed increased secretion of adrenaline, which brought about body reactions resulting in dark-cutting carcasses.

A new attack on grubs

Entomologists have developed a new insecticide that can be fed to animals just after the heel-fly season ends—it moves through the body, will destroy both northern and common species of grubs before they break through the hide.

Researchers will need another year, however, to check all possible effects before the chemical will be available commercially.

Antibiotics valuable in rations

Aureomycin and terramycin gave good results in rations of calves, yearlings, and fattening cattle in recent Purdue University tests. Calves fed antibiotics gained 10 percent more rapidly, showed no signs of scouring, and had a sleeker hair coat. Yearlings and fattening cattle both showed greater gains when antibiotics were added to daily rations.

OUTLOOK

Cattle prices hinge on the drouth

If it persists, look for wholesale liquidation of grazing herds—stiff competition for top-grade stuff for the consumer meat dollar.

Liquidation would add to current supplies of beef and prevent the moderate improvement in prices otherwise in prospect. In short, *the market for all kinds of cattle would be rough.*

Liquidation, however, has a silver lining—longer range. Depending upon how far down the cattle population is cut, it means considerably higher prices later—probably beginning in 1958. Liquidation would include lots of cows and calves, thus cutting down the beef production capacity a year or two in the future.

But if Western and Southern pastures improve significantly, then rebuilding of herds would check marketings.

We should be past year's low for Choice

Prices for Choice cattle may be near or past their low for this year. A moderate price improvement is probable during the next 6 months. If some business recession develops later this year, as a *minority* of economists expect (most don't), price advances for Choice and Prime cattle would be limited. This would suggest that *early finishing and sale of quality cattle may be advantageous.*

Start putting weight on your cheap cattle

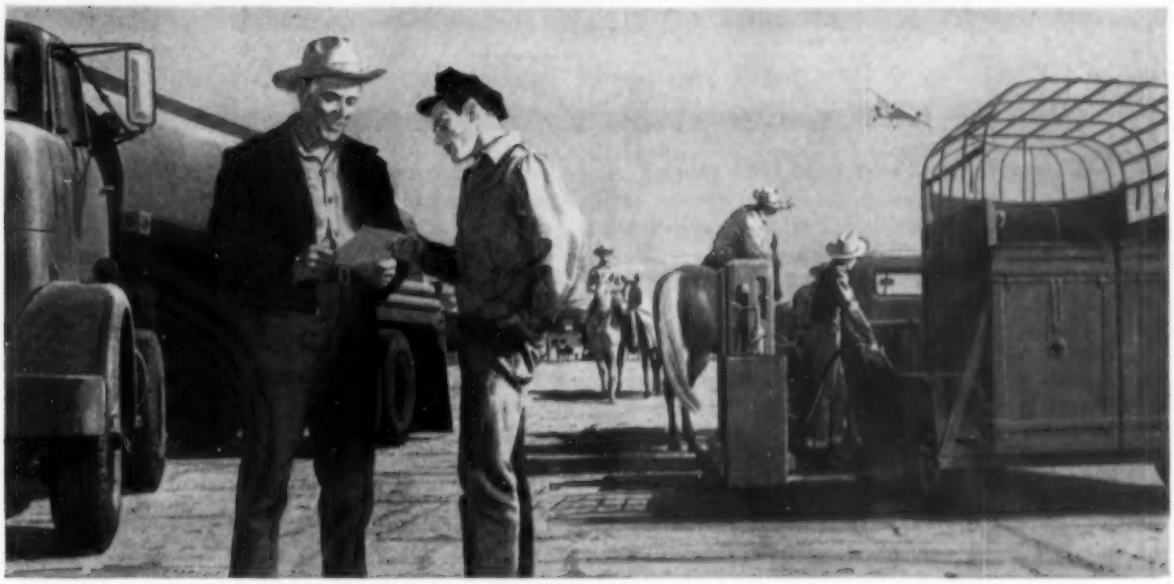
Plan now to get weight on cheap cattle—cows and the lower grades of steers and heifers—and head them to market before July.

Expect wider spread between grades in '57

U.S.D.A. looks for more price stability for fed cattle in the first half of this year. But the price spreads *between* high and lower grades are expected to be wider than those of last year.

Last year, the fed-cattle market was depressed by big run of highly finished heavy steers. Prices for top steers were down most, spreads were narrow. But a bigger proportion of cattle on feed this winter is young stock.

4 good reasons for putting new Champion Spark Plugs in all your farm engines



1. Greater Economy—You'll be surprised at the gas saving when you replace worn, misfiring plugs with new full-firing Champions. The Powerfire electrode delivers peak performance from every drop of gas for the full life of the plug.

2. Better Engine Protection

Protect oil against dilution—and help prevent costly repair bills—with new Champion Spark Plugs. Misfiring plugs drip raw gas that dilutes protective engine oil.

3. Quicker Starting

New Champions give you quicker starts, help save your battery. Tests show replacing worn plugs with new Champions gives starts averaging 39% faster.

4. More Useful Power

When you need full power, you get it with new Champions. In tests, replacing plugs that had gone about 10,000 miles gave an average of 24% more road horsepower.

You can never afford engine breakdown on a farm or ranch. And spark plug failure can stop *any* engine cold. That's why it's so important to regularly check the spark plugs on *all* your engines. If the electrodes are worn or pitted away, replace the entire set with dependable new Champions.

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Dependable 5-Rib

CHAMPION

SPARK PLUGS

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WHAT'S NEW

Grain sorghums have good feed value

Most grain sorghums nearly equal corn in their feeding value for swine, say extension animal husbandmen at Iowa State College.

They add that pork produced from sorghums is of quality equal to that produced from corn.

Kaffir, milo, and feterita are worth about 90 percent as much as the same weight of corn. However, sweet sorghums, or sorgos, are usually grown for forage and their grain has less value. Carotene content of sorghums is low as compared to corn, and must be supplemented with other sources of vitamin A. Green, leafy alfalfa will fill the bill.

Meat-type hog contest

Missouri and Kansas hog producers will have the opportunity of entering a meat-type hog contest soon. Contests will be based on community meat-type clubs. Civic clubs or community service organizations will be eligible to enter a minimum of 5 hog producers. Local club officials will certify farrowing dates, number of pigs per litter, and identification of litters. Hogs will later be scored as to meat type and rate of gain.

Heading the contest will be Jack Jackson, farm director of KCMO in Kansas City, who will work closely with extension marketing specialists and county agents in Kansas and Missouri.

Roughage experiments underway

The U.S.D.A. and University of Wisconsin are cooperating on swine roughage utilization studies at the LaCrosse Experiment Station. Main objectives of the study are:

- To determine the most profitable use of pasture and high-quality roughages by swine.
- To learn what soil-conserving practices are necessary to accommodate swine production on land subject to erosion.

In addition, they will plan and construct special housing suitable for cold-weather farrowing, and make observations on laborsaving housing and management practices in swine production.

Attack leptospirosis

Best bet for eradicating leptospirosis from infected swine herds seems to be the use of antibiotics together with vaccination. That's the opinion of the University of California researchers who are looking for more effective control of this costly disease. A vaccine has been developed which apparently stops the disease from spreading in infected herds.

OUTLOOK

Danger signs are up for '58—too many hogs

Make the most of hog sales this year—all signs point to skimpier profit margins in 1958. Another increase in pig population is around the corner. This means lower prices.

HERE'S THE WAY THE EXPERTS SEE IT: Higher prices this year, brought on by the smaller 1956 fall pig crop, are encouraging the boost in hog production.

U.S.D.A. forecasts the '57 spring pig crop at 2 percent under last spring. But this margin may be wiped out because of steady improvement in *number of pigs saved per litter*. This marks the end of the crop downturn.

The fall, 1957 pig crop will show an increase, say U.S.D.A. experts. And when that crop hits the market next winter *it means price troubles*.

Expect hog prices to go down, then up

Hefty winter prices for hogs will soften considerably this month. Lower prices are brought on by seasonally heavy marketing of the '56 fall crop. This trend is expected to carry into early April. (Price improvement may develop in April, but is more likely to come later.)

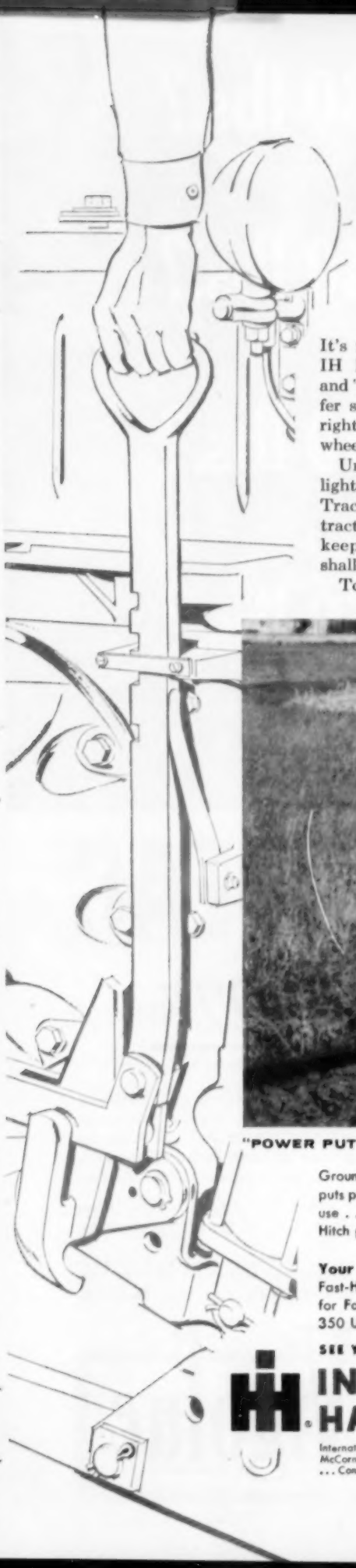
After that a new seasonal price rise is in prospect—carrying from about May to early August. The summer peak will be bolstered by smaller supplies of sows as well as barrows and gilts. Peak will be higher than last summer's $16.80 average, the experts forecast.

NOTE THESE NUMBER CHANGES: Best prices this spring and summer will be in western Cornbelt, where fall pig crop was down 7 percent. Iowa crop was off 5 percent. Biggest reduction was in Nebraska—down 18 percent. Illinois was up 2 percent, Indiana was up 3 percent.

Early fall Cornbelt pigs were reduced most—June to August farrowings were off 11 percent—September to November down only 2 percent.

Consider buying feeder pigs this spring

Think about buying a few this spring—if they are priced right for you. Hog markets will be good next fall and winter—probably will show less monthly variation than in 1956.



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Ground-gripping traction that grows with the load puts power of new Farmall® 450 (above) to better use . . . pulling new McCormick® 4-furrow Fast-Hitch plow in hard, root-bound sod.

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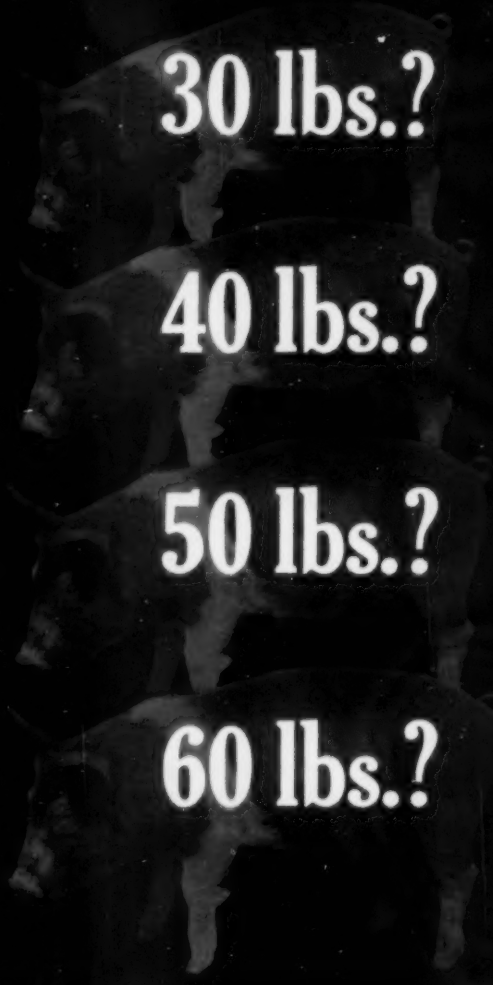
My IH dealer is_____

What will your spring pigs weigh at two months...



30 lbs.?

40 lbs.?

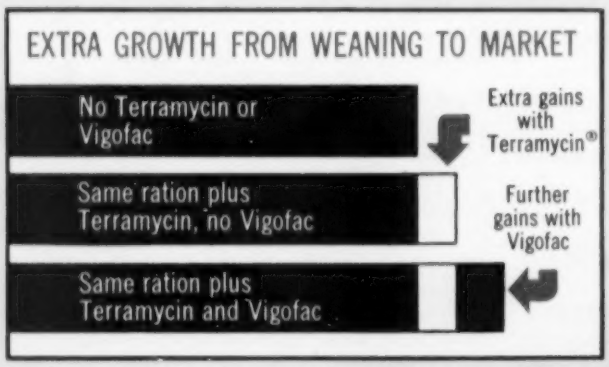
50 lbs.?

60 lbs.?

FEEDS WITH VIGOFAC®

BOOST EARLY GAINS UP TO 22%

Now, you can give your baby pigs an extra-fast start this spring. Feeding results with thousands of pigs show that feeds containing Vigofac—the new extra-growth discovery—gives up to 22% faster, early gains.



Vigofac gives you the most extra gains at the lowest cost. Vigofac gains are in addition to gains you are already getting from antibiotics and other growth-promoting feed ingredients.

Vigofac is also available in growing and finishing feeds. Fed all the way to market, Vigofac produces up to 25 lbs. more pork per hog or saves you up to 50 lbs. of feed, cutting time to market by 2-3 weeks. Vigofac has produced 8-week-old pigs weighing 60 lbs.

Remember, Vigofac gains are in addition to those you get with antibiotics and other growth-promoting feed ingredients.

If you want better-doing pigs than you've ever had before, make sure the next feed you buy contains Vigofac.

Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

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® TERRAMYCIN BRAND OF OXYTETRACYCLINE

WHAT'S NEW

What about pelletized feeds?

They're becoming increasingly important to animal nutritionists in their study of economical milk production, according to H. D. Bruhn, agricultural engineer at the University of Wisconsin.

Bruhn says pelletized feed must first meet nutritional requirements of the animal; research work is being designed with this in mind. In experiments with roughage he reports fine grinding seems desirable from standpoint of ease and economy in production of pellets. A problem, though—finely ground material upsets the rumen physiology in the cow so milk drops in fat content and the cow gains in body weight. There's evidence, however, that pellets using roughage in a chopped or coarsely ground state may be O.K.

Provide plenty of water

Dairy cows watered automatically drank 18 percent more water and gave 3½ percent more milk in experiment station tests at Rutgers University. For outside watering, extension farm engineers stress importance of heating equipment during cold weather—to ensure a ready supply of drinking water at temperatures comfortable to the cows.

Mastitis carried in pond water

Mastitis organisms can enter a cow's body through bruised teats and udders if cows wade in contaminated ponds, says Dr. M. W. Osburn, Kansas Extension Veterinarian. His advice—fence ponds to keep cows out of the water, then provide drinking supply from a tank.

Feed more high-quality roughage

You can get your cows to eat up to 20 percent more roughage with a little extra effort in production and feeding, report dairy specialists at Rutgers University. They stress the importance of proper harvesting, then offer these tips for winter feeding:

- Feed roughage 3 or 4 times a day if it's of the best quality.
- Sprinkle molasses on poor hay.
- Clean leftover hay out of the manger each time cows have had their fill.
- Add variety by feeding legume and grass hay alternately.

Roughage can lower your feed bill, says extension dairyman Frank Wright. A hundred pounds of total digestible nutrients in grass silage costs about $2.30—100 pounds of TDN in grain, $5.55.

Low production—low labor returns

Here's a comparison from Indiana Dairy Herd Improvement Association records: With a yearly per-cow production of 4,000 pounds of milk, cost to the owner was 23 cents for each hour of labor; for 6,655-pound level, hourly wage-rate return was 55 cents; at 13,274-level a $2.21 hourly return for labor was realized. Moral to the story—watch out for low producers.

OUTLOOK

Dairy income will be higher

Your cash income from milk and butterfat will be higher this year, because production is up, and prices won't slip as long as C.C.C. guards the price line.

THIS IT INTENDS TO DO, as indicated by C.C.C. offers in January to sell butter here at home and for export at the same prices as last October—when sales were stopped for lack of supplies.

No cut in dairy props is likely

Decision on 1957 support levels will be made in March *by the White House*. This means the *same or slightly higher levels* than in marketing season now closing. New supports take effect April 1.

Secretary Benson will argue for lower support—but political pressures are expected to overrule.

Fact is that while production and government buying are up, U.S.D.A holds fewer dairy products. It gives them away as fast as it buys.

More cows per farm, but fewer farms

The long-term trend toward larger but fewer dairy farms is likely to continue during the next few years. The Census of Agriculture revealed that in 1954 less than 3 million farms reported any milk cows, as compared with 3.6 million in 1950, and with 4.6 million in 1940. A compensating increase in number of cows per farm has occurred.

No change in program this year

While new proposals for changing the dairy support program are being handed Congress, lawmakers confide it will be at least 1958 before any change is made.

Proposal to watch for will come from the National Grange Dairy Program Advisory Committee. Grange wants a marketing quota system with a dairymen's checkoff of about 10 cents a hundredweight to help dispose of surplus. U.S.D.A. would be ruled out of the business of buying surplus.

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Unlike other leading toothpastes, Colgate's forms an invisible, protective shield around your teeth that fights decay all day . . . with just one brushing! Gives you a cleaner, fresher breath all day, too! Ask your dentist how often to brush your teeth. But remember! No other leading toothpaste* cleans your breath while it guards your teeth like Colgate Dental Cream with Gardol!

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POULTRY

WHAT'S NEW

"Eat extra eggs"

Poultrymen are hoping you do—they've set aside March as National Egg Month and will be launching out on a long-range program designed to increase egg consumption. Campaign is under the sponsorship of the Poultry and Egg National Board.

Caged laying systems gain

Caged laying is becoming more popular in Iowa, report extension poultrymen at Iowa State College. Over 350 cage systems are now in use, with flock sizes ranging from 600 to 5,000 layers.

Extension poultryman Paul Walther adds these comments:

- A laying house will accommodate 1¾ more hens if they're kept in individual cages rather than when allowed to run loose.
- Labor requirements per hen are higher with caged birds.
- Houses for cage systems must be well insulated and ventilated in order to maintain proper temperature and humidity control.
- The total initial cost for a cage house and equipment is about $1 less per bird than for an adequately equipped floor house.

Watch for intestinal coccidiosis

It strikes fast, and only a sharp poultryman can spot it in a flock. Greatest problem is when chicks are between 7 and 16 weeks of age but disease can attack until time chickens come into production, say Michigan Extension poultrymen. Coccidia are difficult to destroy with disinfectants—best control, thorough cleaning, disinfection, and sanitation.

Clear up synovitis

High levels of streptomycin and use of terramycin are effective for combating infectious synovitis, the arthriticlike disease causing problems for poultrymen across the nation. In tests with high levels of streptomycin no ill effects were reported and birds returned to normal within 3 days. No recurrence of synovitis was noted in the tests.

New use for carbon dioxide

Maybe so—for keeping eggs fresh longer. Looks good so far, say Minnesota researchers. Treating with carbon dioxide delays breakdown of egg whites and yolks if eggs get the "treatment" within 4 days after they're laid. When treated, eggs will maintain high quality and grades even if kept at higher than desirable temperatures for a period of time. The much-used "oiling" process is a good companion treatment, too.

To control respiratory diseases

Here are suggestions offered by Minnesota poultry researchers for controlling chronic respiratory disease in chickens, infectious sinusitis in turkeys.

- Diseases are egg-transmitted, so obtain hatching eggs or chicks from healthy source.
- Don't raise young birds near old ones.
- After chicks are vaccinated for other diseases, feed ration including broad-spectrum antibiotic (50 grams to a ton of feed).
- Antibiotics won't cure the disease but will help suppress it.
- If outbreak occurs, market the flock as soon as economically possible, then disinfect equipment.

OUTLOOK

Low egg prices to continue

Production continues at record levels, pointing to lower-than-1956 farm prices for the next few months. Production is averaging about 4 percent above 1955—mainly because of a 3-percent increase in rate of lay per layer.

While number of chicks raised per laying-flock replacement in 1957 will be less than 1956—the cut won't be as big as you'd think by the low prices. Lower prices are having less immediate effect on chick numbers. Increased output per bird and a tendency to keep layers longer are stronger factors.

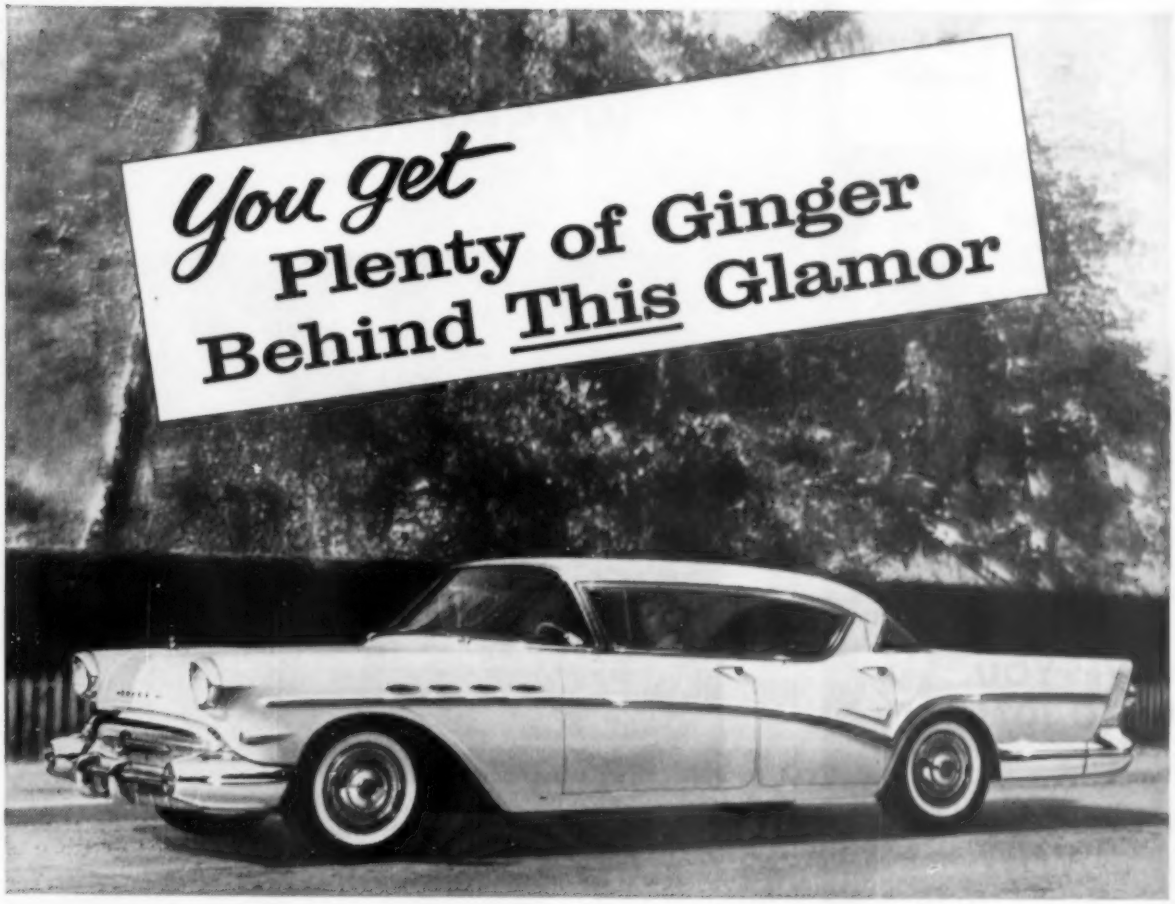
Broiler supplies are going up

February and March supplies are bigger than those of January. Don't expect the slight January price bulge to carry much further. Volume is forecast at 10 percent higher this year than last.

Turkey raisers please note

U.S.D.A. bought 27 million pounds of turkeys for price support last fall, and said that "even with this assistance, prices received by producers have been the lowest in several years."

About the same time Secretary of Agriculture Benson warned: "The turkey industry cannot count on government buying in every year as a part of their market outlet. Instead, all operatives—breeders, hatcherymen, and turkey growers—should make every effort to avoid overproduction for better returns in the open market."



YOU LOOK at a '57 Buick and you can almost hear yourself saying: "Now that's a smart-looking car!" And do you know why?

Because it is just that—long and low and sweepingly graceful—styled for newness to be bold and fresh, *not* flamboyant.

So you find yourself going for the good looks of this bright new Buick—and you explore a little more.

That's when the excitement goes way down deep.

That's when you're behind the wheel—feeling the *instant* response of that new Variable Pitch Dynaflow* —now so full-range and flexible in "Drive" even without switching the pitch, your need for "Low" is practically eliminated.

It's a new kind of performance, sparked by the brilliant new obedience of a big 364-cubic-inch V8 engine with the highest horsepower, compression and foot-pounds of torque in all Buick history.

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You go on and on—and get happier and happier.

For you're bossing an automobile that's completely new, from wheel covers to lower roof line. New in styling, new in power, new in performance, new in ruggedness, new in safety.

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The farmer's WASHINGTON

At a recent soil bank hearing, House Agriculture Committee Chairman Harold Cooley (left) asked: "Then you favor putting other feed grains on the same basis as corn?"

To which Secretary of Agriculture Ezra Taft Benson (right) replied: "It would be more accurate to say I favor putting corn on the same basis with other feed grains."

How much corn to plant. If the 1957 corn program still is up in the air by planting time, your best bet is to plant within the farm base acreage you received before the December referendum. That is, if you want to seal corn. From all indications, the 1957 price support-soil bank program will be based on that identical acreage.

Regardless of what they finally call it—base acreage or acreage allotment—the feeling in Congress is for permitting production on 51 million acres this year in the commercial area. Your base acreage, of course, is a share of that 51 million acres.

New program. By planting within your base acreage, you very likely will be right in line with the new program when it's finally put on the books. You would be eligible for the full support and would meet the stay-within-allotments requirement of the soil bank. And if by chance Congress goes another route—always possible up to the last minute—you would be given an opportunity to cut back and get into compliance with the law at a later date.

What support level? While Secretary Benson and the bulk of the Midwest congressional delegation agree on the *size* of permitted corn plantings this year, they are wide apart on the specific level of price support for the 1957 corn crop.

The secretary is opposed to any floor under corn price support. Because corn has "special problems," such as the fact that 80 percent of it is fed on farms where produced, Benson believes he should have complete discretion on where to set the support level.

Benson revealed his intention clearly in a give and take with House Agriculture Committee Chairman Cooley at recent soil bank hearings. (See photograph top of page.)

Led by Minnesota's Congressman August Andresen, top-ranked Republican on the House Agriculture Committee, Midwest lawmakers are pushing for a minimum support level of at least 75 percent of parity on corn. They are aware of Secretary Benson's desire to take away a minimum guarantee on corn and plan to fight it on that basis. Agriculture officials, meanwhile, indicate that Benson would compromise on a floor of 70 percent of parity if he had to give way. This would give support at roughly $1.25 a bushel, compared with Andresen's 75 percent level of about $1.33.

Soil bank. Whatever program Congress finally legislates for corn, it will carry a provision opening up the soil bank to corn growers. Both Congress and Secretary Benson want to do this, but there's

[*Turn to page 18*

What kind of headaches do YOU have?

Your physician will tell you there are many different kinds

Tension—Do you pay the price of headaches as the result of the tensions of today's living? Then you should discover Bufferin, the modern, faster-acting headache remedy.

Sinus troubles frequently cause headaches. When this happens, it's the perfect time to take Bufferin because Bufferin acts *twice as fast* as aspirin to bring prompt relief.

Cold miseries are apt to hang on and often require prolonged treatment. That's why you need Bufferin, the modern antacid pain-reliever—and you can keep taking it as long as those painful cold miseries last without fear of upset stomach.

If you take aspirin for any of these ailments remember

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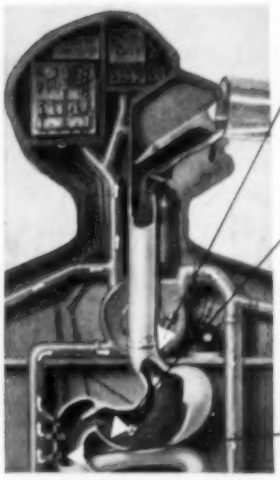

1. Medical science knows that a pain reliever must go through the stomach and into the blood stream to relieve pain.

2. Bufferin combines aspirin with two antacid ingredients. These speed the pain reliever out of the stomach and into the blood stream twice as fast as aspirin. So . . .

3. Bufferin acts twice as fast as aspirin to relieve pain. And it won't upset your stomach as aspirin often does.

. . . and won't upset your stomach the way aspirin often does

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On the farm, in the home . . . new Black & Decker Heavy-Duty Saws are versatile, powerful, packed with new features to make any sawing job a cinch!

Want to fix a chicken coop, hog pen, corn crib? Get that tool shed or shelter started? Put up a complete building, an extra room on the house? Then you want a new Black & Decker Saw for the fastest, surest sawing you've ever done!

And you can make your B&D Portable Saw a tilting arbor saw by adding a B&D Saw Table—only $39.50. See your B&D dealer today—or write to: THE BLACK & DECKER MFG. Co., Dept. F-037, Towson 4, Maryland.

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NEW VISIBILITY — New picture-window view, new double guide edge makes line-of-cut and cutting edge of blade visible at all times. New air flow blows sawdust clear of job, clear of your eyes.

B&D Black & Decker®

World's Largest Maker of Portable Electric Tools

The farmer's Washington

From page 16

little agreement on how it should be done.

For example, Representative Andresen's bill would permit you to plant up to your base acreage level and put land equal to 15 percent of that base into the acreage reserve. *This reserve land could be any tillable land—and would not have to be corn land.* The Department of Agriculture however, wants the 15 percent to come out of strictly corn acres.

The issue may well be settled by the strong Southern contingent in the House committee. It has served notice that corn legislation may be held up or watered down unless the Southern crops of cotton, tobacco, rice, and peanuts get "equal" treatment in the soil bank with corn. Southerners are bitterly assailing what they term "windfall profits" to corn farmers in last year's soil bank, pointing out that corn received 70 percent of all acreage reserve payments, while the four Southern crops combined got a total of only about 14 percent.

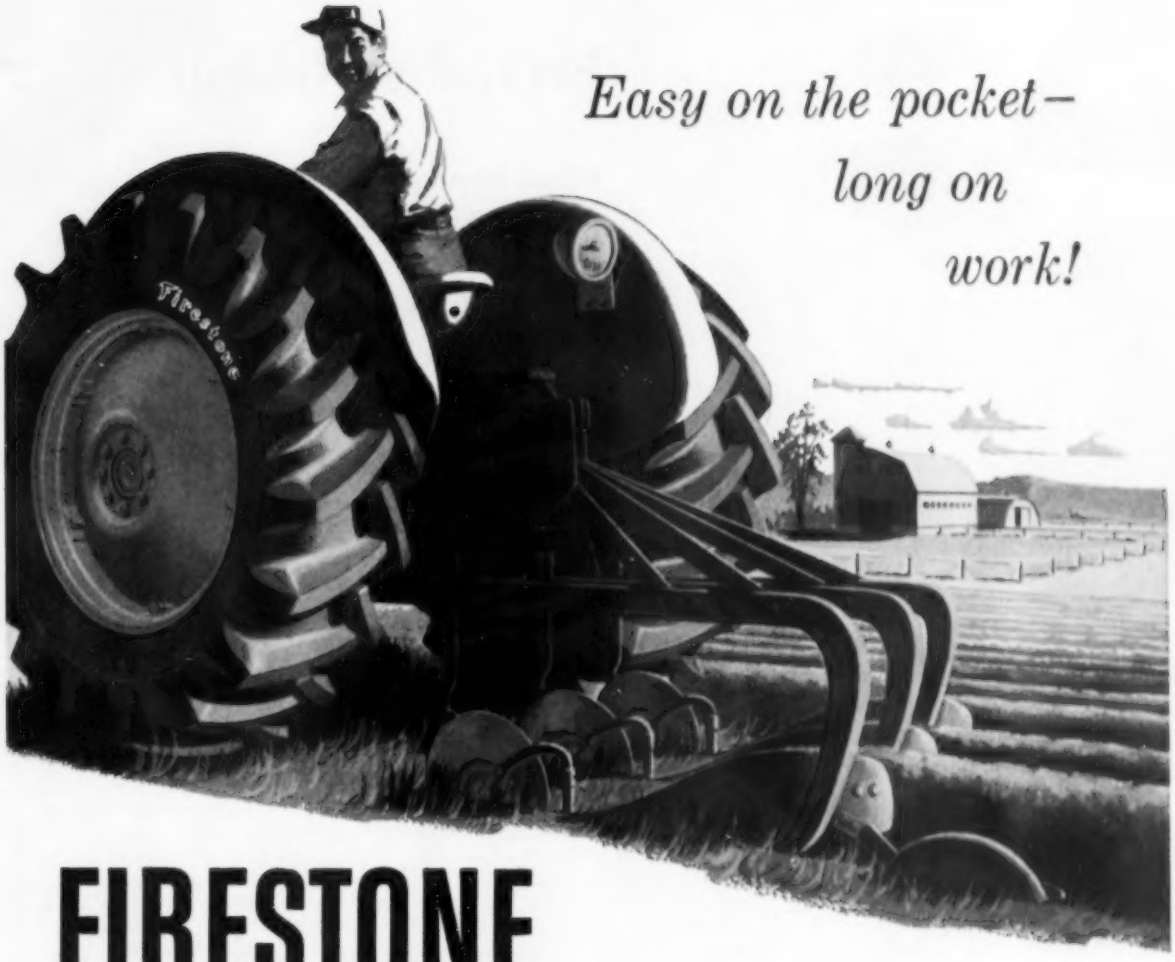
Drouth program. Drouth relief, particularly for the bone-dry plains area, is snowballing fast. It's to be a big issue in Congress this year. The president's requests for millions for immediate drouth relief is an addition to the big budget request—and is apparently only a starter. Ike's drouth tour touched off a nationwide scare of the possibility of millions of acres of new desert in America.

One of the big issues is whether the federal government should buy up drouth land. Pressure is on for it, but the administration inclines more to a rental program—under which farmers and ranchers would be paid for not cropping or grazing. This is one of the key proposals made by the Great Plains Council.

While the odds are beginning to favor a program like that, Ike does not want to go ahead unless he can get the affected states to join in the operation. He is convinced that states must do more for drouth-stricken farmers and ranchers.

"Spunky"

"Look at it another way—we don't have to milk 'em tonight."



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Friend to friend

- **Each farm is a special problem**
- **We can't go backward in farming**
- **Best is never good enough for cattlemen**
- **It's time to try hybrid sorghums**

● For many years I have had times when my digestion was not good. That isn't important except the malady is a common bond of interest for a lot of folks. Since so many others are indiscreet about their eating habits, too, I have received much advice on treating indigestion. Likewise, I have given much to others. Frankly, I haven't found the advice of my friends worth much. They doubtless think the same of mine. Each one of us is an individual problem.

The same line of thinking can be used when we attempt to advise individual farmers about their business. As editors, we aim rather to present the latest practical information from farms, experiment stations, and industry. Then the reader must decide what information fits his case. And sometimes the best solution to an individual problem is not good for a section of the farming business.

A reader was quite irritated when one of our recent articles suggested raising more hogs. The author was trying to help the men who could expand operations a little. But, of course, if every hog raiser followed the suggestion, there would be too many hogs and prices would drop.

● My mail brought a stormy crop of letters after I stated my belief too many men are now trying to make a living from the land. Certainly, I want to see as many opportunities as possible kept open for young men who want to farm. But we can't keep on increasing the productivity of farmers without greatly expanding domestic and foreign demand.

I think it certain that the trend to fewer and larger farms will continue. Unless a man can increase his total production, he may be wise to take a careful look at other kinds of work before he goes broke farming.

There are many reasons why farming must be a larger operation in the future. One of the most important is the family desire for a better standard of living. It takes more money to own and operate an automobile than a team of horses. Does anyone want to go back to horses in order to stay in the farming business? The same goes for modern machinery, fertilizer, and improved crops and livestock. No, we can't go backward.

● A day I shall never forget was spent with Vern Schneider, our livestock editor, on the Wyoming Hereford Ranch. We were the guests of that superb manager and Hereford breeder, Bob Lazear. The photograph above shows Mr. Lazear (wearing a hat), myself, and the ranch's broad, thick, beefy herd sire. It seems impossible that much more improvement could be made in most of our Western herds. And yet improvement is sought and is being made every year. Gaining ability, quality of meat, ability to thrive under hard range conditions, meatiness—are all within the range of gradual improvement.

In case you are fortunate to be in the vicinity of Wyoming Hereford Ranch, don't overlook the careful range management, too. Good animals must have enough to eat if they are going to show their qualities.

(Since going to press, we received word that Bob Lazear passed from this life January 25. Deeply religious, he was known nationally for leadership in his church.)

● Did you read the story of the new sorghums in the February issue of *Successful Farming?* T. L. Wainscott, crops and soils editor, did a lot of traveling to collect that information. Then he did a great deal of puzzling over the right slant to give the story. Knowing there is yet much to learn about the new hybrids, he did not want to seem overenthusiastic. Also knowing the great possibilities, he tried to avoid being cautious.

Kirk Fox

Strike at the Root of Crop Destruction!

Caught in the act attacking the roots of a young corn plant are wireworms, rootworms, white grub, seed corn maggot, cutworms. (Magnified four times.)

"A sure hit," report thousands of growers who use aldrin. Powerful aldrin really strikes back at rootworms, wireworms, cutworms, white grubs and other soil pests!

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Aldrin is available in all popular formulations. Apply it as a dust, spray, as granules, or get it ready-mixed with starter fertilizer. Any way you use it, you can be sure of effective soil pest control. Aldrin formulations are economical. In most areas, you need only a few ounces of actual aldrin per acre for top control.

This season, don't gamble with soil pest damage—use the proved control. Use aldrin. Aldrin and complete information on its application are available from your insecticide dealer. Start this season right. Start with an aldrin soil treatment!

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$399.95 Less Your Trade-In

No money down.* $4.75 a week, payable monthly.

Save on food — save on shopping trips — and save $100 on the low, low price of this newest refrigerator-freezer combination at Gambles! Big 9.35 cu. ft. refrigerator section has aluminum glide-out shelves, butter keeper, egg trays, snack pantry shelf. Defrosts itself automatically, too — no buttons, no clock, no messy tray. Completely separate freezer holds over 4 bushels of frozen food at subzero temperatures. And you'll like the freezer juice rack, party ice cube basket, foot-pedal release for freezer door!

ROCK-BOTTOM PRICES

PLUS BIG TRADE-IN ALLOWANCES

On Nationally Advertised CORONADO

Gambles

CORONADO "CUSTOM 30" GAS RANGE

Compare this sensational range . . . feature for feature with others at $189.95

TODAY'S BEST BUY AT

$148.88

No money down*
$1.00 a week, payable monthly

- Four hi-lo simmer type burners PLUS combination griddle-5th burner
- Giant-size oven with fog-proof "Perma-View" glass panel and automatic floodlight!
- Child-proof lock-type valves — universal type for all gases!
- Telechron electric clock, minute minder, full-width fluorescent lamp!
- Buy it now . . . pocket your savings of over $40!

* If trade-in equals 5%

All-time low price on this glass-lined

CORONADO Custom Gas Water Heater

REG. $94.95

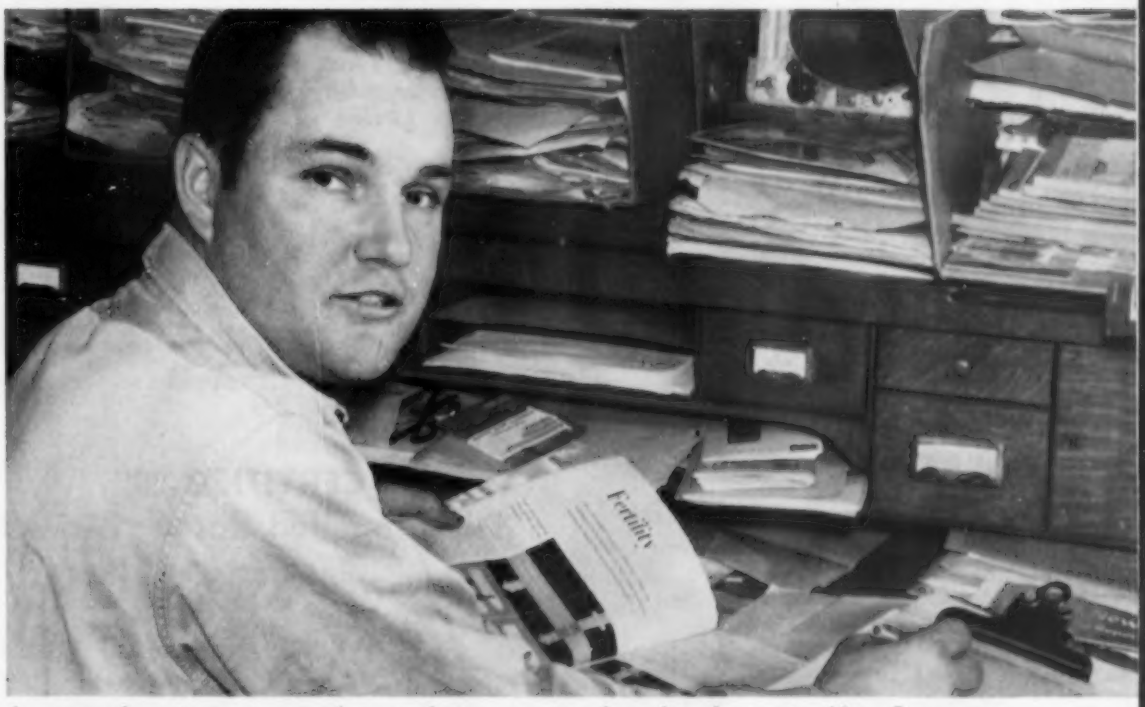
SALE PRICE

$88.88

$8.88 down
$1.40 a week, payable monthly

Say goodbye to water heater troubles when you own this gleaming new glasslined Coronado with famed Torrid-Temp fast-recovery burner. Won't rust ever, because glass can't rust! 100% automatic safety pilot, famous Robertshaw Control for accurate temperature adjustment. 10-year warranty. Uses Natural or Bottled Gas.

How do you buy nitrogen?



A man can buy nitrogen in many forms, and at many prices these days. Last spring Harry Broermann, Tarkio, Missouri, wanted to apply 100 pounds of actual nitrogen on 200 acres of corn ground—a total of 20,000 pounds of N. Here's a page from his record book which gets the facts down for easy comparison.

	Pounds N in a ton	Retail price per ton at track	Number of tons to move	Total cost	Delivery @ $3.09 ton	Total cost on farm	Application	Total cost applied	Cost per pound N applied
SOLID									
Ammonium nitrate	670	$ 79.00	29.85	$2,358.00	$ 92.24	$2,450.24	$1.25/a broadcast $250	$2,700.24	.1350
Urea	900	121.00	22.22	2,688.62	68.66	2,757.28	250	3,007.28	.1503
Ammonium sulfate	420	71.50	47.62	3,404.83	147.15	3,551.98	250	3,801.98	.1900
SOLUTION									
41%	820	86.10	24.4	2,100.84	75.40	2,176.24	$2/acre injected 400	2,576.24	.1288
37%	740	77.70	27.03	2,100.23	83.52	2,183.75	400	2,583.75	.1291
32%	640	76.80	31.25	2,400.00	96.56	2,496.56	$1/acre sprayed 200	2,696.56	.1348
28%	560	67.20	35.71	2,399.71	110.34	2,510.05	200	2,710.05	.1355
GAS									
Anhydrous ammonia	1,640	130.00	12.2	1,586.00	37.70	1,623.70	$2/acre injected 400	2,023.70	.1011

First, Harry listed all the nitrogen fertilizer materials which were available to him, in the forms of solids, liquid solutions, and gas. For each of these carriers he put down the pounds of actual nitrogen in one ton of fertilizer.

Next, he listed the retail price of each fertilizer at the railroad track, or the dealer's freight delivery point.

This is important. Many farmers can employ themselves and their equipment to haul their own fertilizer from freight delivery point to the farm. The retail price figures in the chart do not represent the fertilizer prices all over the country. They do represent the prices one farmer found in his trade area.

The number of tons of each material he needed, would have to haul, handle, and get spread came next. This multiplied by [*Turn to page 82*

Rolls on easily! No painty odor! Dries in minutes!

HOMEguard SATIN LATEX

$4.98 GALLON

QUARTS $1.49

BUY PAINT ON EASY TERMS!

Choose from 36 fashiontone colors!

No mess, no bother when you redecorate with HOMEguard Satin Latex. Just one coat with brush or roller covers, leaves no lap marks, dries in minutes. And it's VELVETIZED for a lastingly beautiful, scrubbable finish. Ordinary tap water cleans up brush, roller, spatter marks. One gallon is enough to paint an average room.

(B30-5026-41) (B30-5001-16)

Now guaranteed 24 months!

VARCON DELUXE TRUCK-TRACTOR BATTERY

(B3-405)

$11.45 Gr. 1 Exch.

Top-quality battery with full two-year guarantee! Hard rubber case, plastic separators, silver sealed grids.

39 plates, 80 amp. hr. capacity

(B3-401)

VARCON SUPER ACTIVE TRUCK-TRACTOR BATTERY **$13.95** Gr. 1 Exch.

Now guaranteed 30 months! 45 plates, 100 amp. hr. capacity. A TERRIFIC VALUE AT.....

Give your bathroom a modern look with this

$13.95 VALUE SLIDING DOOR MEDICINE CABINET

- Two 10 x 14" Sliding Mirrors
- Mounts on Surface — Easy to Install
- Deep Shelves—White Baked Enamel Finish

Yours for only **$7.49**

(34-2036)

24" GRILL TYPE CHICK FEEDER

SAVE 13¢!

Reg. 79¢ NOW ONLY **66¢**

Galvanized steel feeder with red hinged grill.

(B30-2833)

Bargain price on a popular favorite!

FULL GALLON ALL-PLASTIC POULTRY FOUNTAIN

Transparent white jar, bright red base, both of unbreakable plastic.

Reg. $1.49 YOURS FOR JUST **99¢**

(A30-9636)

Save $1.16 on this comfortable Farmcrest

(30-2250)

TRACTOR SEAT CUSHION

Certified Value — Yours now for..... $4.95 **$3.19**

19x21" foam rubber cushion with heavy duty plastic cover.

Save $2.46! Farmcrest "Ranger"

ELECTRIC FENCER

Famous "Farmcrest" quality gives you trouble free, easy stock control. 6-volt battery model. Wisc. Industrial Commission Approved.

Reg. $12.95 SALE PRICE **$10.49**

(B30-3205)

National March Sale

SIX BIG SPECIALS FOR THE HOMEMAKER

Lady Helen elasticized

Ironing Board Pad and Cover

A $2.50 VALUE

(B19-6113)

Get Yours for Just **$1.66**

(B19-600)

Save $2.00 on this lightweight folding

LAUNDRY CART

$4.99 Value — Now only **$2.99**

Reinforced fabric basket, rustproof steel frame. Folds completely.

Stretch your budget!

LADY HELEN SHEER S-t-r-e-t-c-h NYLONS

$1.65 VALUE **98¢** PR.

Popular dull finish nylons in fashionable neutral shade. Fit your leg perfectly with never a wrinkle. S-M-L fit sizes 8½-11.

(114-0053)

Reduces foot fatigue with this reversible 18x30"

"AKRO-FOAM" FATIGUE PAD

$1.77 SPECIAL PRICE

Reg. $2.39 SAVE 62¢

(B19-6103)

Save 32¢

10 QT. GALVANIZED PAIL

89¢ Value Now Only **57¢**

(B19-6179)

Flexible, washable

DUSTMASTER MOP

SAVE 70¢

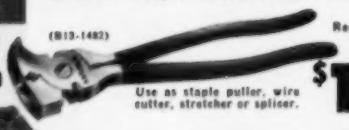
$2.49 Value Now Only **$1.79**

Reaches into corners, under low furniture.

(B10-5002)

SAVE 90¢! FENCING TOOL

(B13-1482)



Reg. $2.89 Now Only **$1.99**

Use as staple puller, wire cutter, stretcher or splicer.

Save 49¢ 16 oz. EXPERT

CLAW HAMMER

$1.60 Value

(B13-1020)

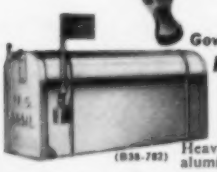
Now **$1.11**

Polished face and claw, black finish.

Govt. Approved Rural

MAIL BOX

Save 96¢



(B38-702)

$3.15 Value Now **$2.19**

Heavy gauge steel with aluminum finish, red flag.

6x8' TARPAULIN — Heavy weight canvas, double-stitched. Reg. $5.49. SALE PRICE **$4.89**

12x14" CHAMOIS — First quality genuine chamois. Reg. 79¢. SALE PRICE.... **59¢**

18 GA. PRIMARY WIRE — Yellow plastic insulated. 25' coil. Reg. 59¢. SALE PRICE **39¢**

FARM SPECIAL OF THE MONTH

FREE!

5-PIECE **JIFFY JUICE SET**

32 oz. Juice Container, 4 Colorful Tumblers of Unbreakable Plastic — $1.10 Value.

WITH PURCHASE OF 3 BOXES OF

Elgrade Milk Filter Discs

6½" Size **69¢** PER BOX — 3 BOXES FOR $2.07

6" Size **59¢** PER BOX — 3 BOXES FOR $1.77

(B30-5948-B)

Only $1.00 DOWN HOLDS!

ARTISAN P22 ROTARY

(B36-5502)

Full 22" Cut

Regular Price $94.50

Pre-Season Layaway Price **$78.88**

$1.40 weekly, payable monthly

Here's a mower that breezes through the big, tough mowing jobs. With its giant 22" cut and powerful 2½ HP 4-cycle engine there's no job it can't handle. Recoil starter, extra-size 8" staggered wheels, side trim and rugged steel base are other big features. See it now at Gambles!

Compare at $12.95

"HANDYMAN" WHEELBARROW

Lightweight, big capacity, tubular frame, jumbo tire. Seamless steel tray with baked enamel finish.

GAMBLES' PRICE **$9.95**

(30-9710)

CERTIFIED 20"

Self-propelled Rotary Mower

(B36-5506)

You Pay Only **$139.95** LESS TRADE-IN MOWER

$1.85 weekly, payable monthly

It's fully self-propelled — just guide this brawny rotary through tall or wet grass, weeds, leaves — the big 2¾ HP 4-cycle engine does all the work for you! Flexor swing-away blade eliminates damage if blade strikes obstruction.

MONEY-SAVING SPECIALS 3 PAGES OF THEM!

(G-0020)

Pump up tires in seconds with this Engine Operated **AIR PUMP**

$3.49 Works from a spark plug opening, pumps at idling speed. Complete with 12 feet of hose and fittings.

(B19-9005)

SAVE 11¢

BALL TWINE 100 FT. **14¢**

25¢ Value — New

(B4-5157)

Sold elsewhere at $1.89. Save 64¢ on this

Flexible Spout **PUMP OILER**

NOW ONLY **$1.25**

Chrome plated flexible spout, ½-pint capacity.

WRITE FOR YOUR FREE COPY OF GAMBLES NEW SPRING-SUMMER DISCOUNT CATALOG! Hundreds of bargains for home and farm. Send postcard with your name and complete address to: GAMBLE STORES, MAIL ORDER DEPT. 43, 15 NORTH EIGHTH STREET, MINNEAPOLIS 3, MINN.

Bring the family when you come to Gambles

BUILD YOUR OWN FUTURE AS A GAMBLE DEALER! Own a store of your own . . . benefit from our proven selling techniques. Write for new booklet "PLANNED SUCCESS in a Business of Your Own." Address Dept. 58, Gamble-Skogmo, Inc., 15 N. 8th St., Minneapolis 3, Minn.

Gambles

The Friendly Store

NOTICE: All merchandise subject to stock on hand. We reserve right to limit quantities. Prices subject to change without notice. Some prices are slightly higher in Western states. If you don't know location of your nearest Gamble Store write: Dept. 31, Gamble-Skogmo, Inc., 15 N. 8th St., Minneapolis 3, Minn.

Liquid starter fertilizers are easy to handle. Bettenhausen Brothers, Will County, Illinois, use dealer's tank (above). Exhaust forces faster flow of fertilizer into tractor tanks.

PTO pump from their weed sprayer applies the starter through the corn planter (left). Rate is 150 pounds per acre of 6-18-6. Putting in 200 acres of corn, these men increased their planting rate 15 acres a day using liquid starter.

Photographs: Suter, Hedrich Blessing

You can apply liquid fertilizer

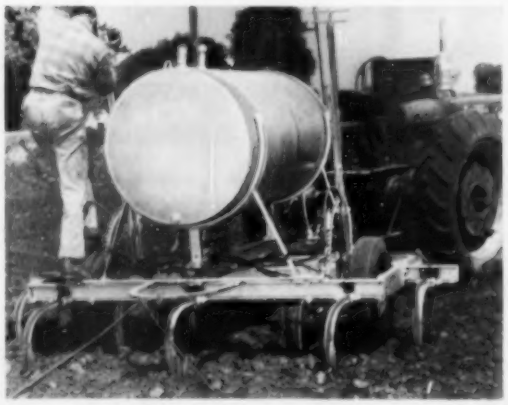
There are many simple systems which combine plant-food application with other field operations. Once you get rolling, it's easy—tanks, pumps, and hoses do the work!

Liquid fertilizer will be available in many new areas this year, as more new plants get into production of complete fertilizers.

Supplies of phosphoric acid, around which complete mixes are made, are now adequate. Urea forms of nitrogen are filling the need for high-analysis carriers to complement anhydrous ammonia and ammonium nitrate. Potassium is supplied in muriate of potash.

Grades may not match dry fertilizer numbers in all cases, but a wide range of grades is available. Grade numbers are on basis of pounds [*Turn to page 82*

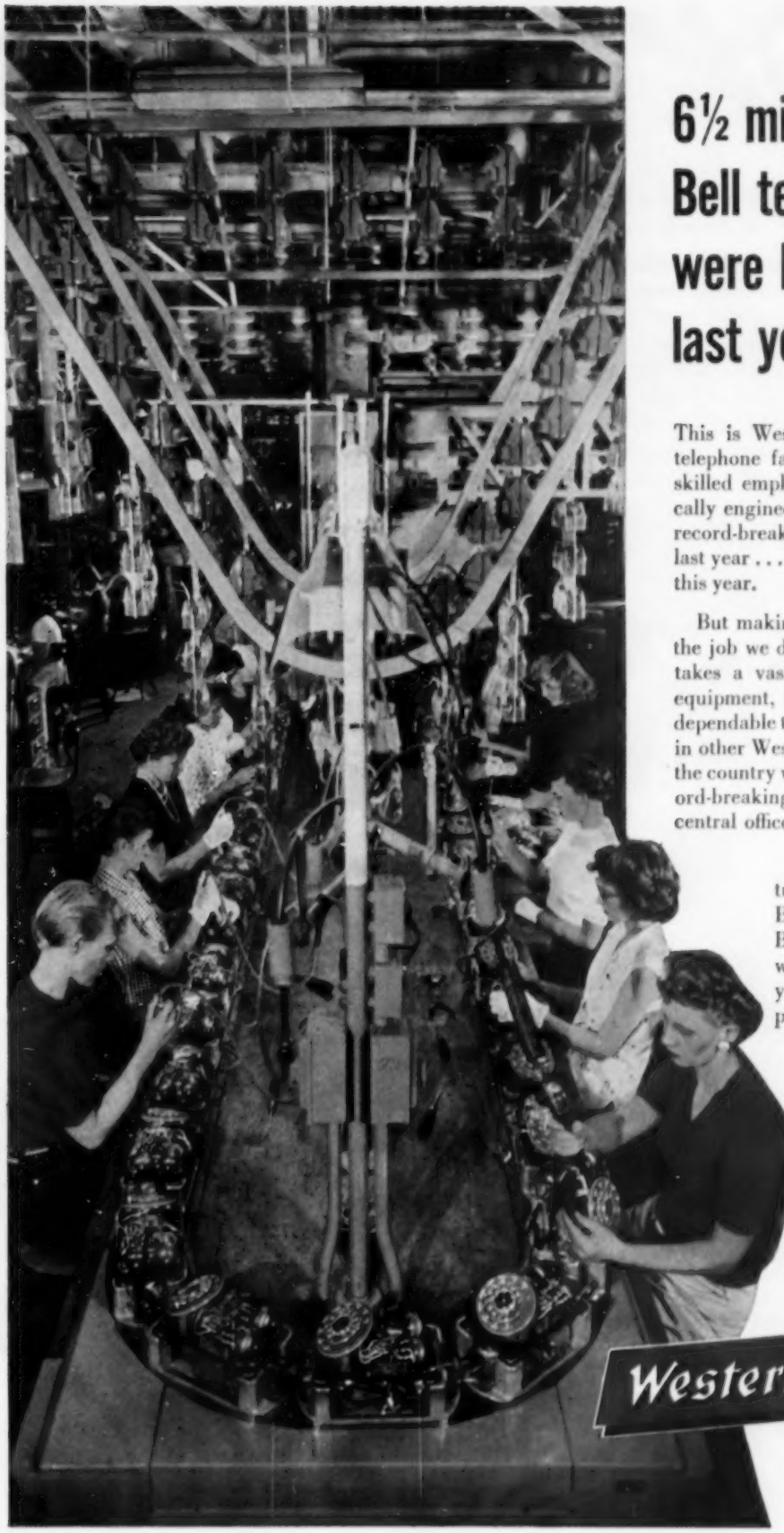
Tractor-mounted tanks. Mixing liquid fertilizers into soil is important. And there are about as many ways to do it as there are tillage implements. Several Indiana farmers use rigs similar to one above to apply fertilizer and disc it in. Gravity-flow system uses central distributor to apply liquid evenly



A field cultivator, with tank mounted on implement, does the job for Raymond Haynes, Piatt County, Illinois. Hoses all lead off a center nozzle union, and lead down the back of each tooth. Fertilizer is gravity fed. Application when this picture was taken, 600 pounds of liquid 16-8-8 per acre

Bulk spreading truck hauls 5 tons of liquid fertilizer, applies it with 30-foot boom which sprays 33-foot swath (10 rows). Small gasoline motor drives pump, assuring even pressure and uniform application from all boom nozzles.

Riegel Brothers of Will County, Illinois, are putting 500 pounds 9-9-9 per acre on this clover seeding going into corn. Note that this fertilizer is plowed under immediately.



6½ million Bell telephones were born here last year!

This is Western Electric's ultramodern telephone factory in Indianapolis. Here skilled employees with unique, scientifically engineered machinery turned out a record-breaking 6½ million telephones last year . . . and expect to make 7 million this year.

But making telephones is only part of the job we do for the Bell System. For it takes a vast amount of apparatus and equipment, besides telephones, to make dependable telephone service possible. So, in other Western Electric factories across the country we're also busy producing record-breaking quantities of wire, cable, central office switching equipment.

It's our job as the manufacturing and supply unit of the Bell System to furnish your Bell telephone company with whatever it may need to give you the good, dependable telephone service you want.

Western Electric

MANUFACTURING AND SUPPLY UNIT OF THE BELL SYSTEM

LOOK! NEW FO

The boldly modern styling you see in new Ford Trucks for '57 only *hints* at how deep-down modern they are!

New Ford Pickups with Styleside bodies (standard at no extra cost) offer extra loadspace, new higher power, completely new cabs, a new kind of pickup ride. The exciting new Ranchero rides, handles and looks like a modern car. Deep-down it's a rugged truck—carries more than many standard pickups. And the completely new medium-duty trucks have higher horsepower, more rugged chassis and stronger, roomier, more comfortable cabs. *See your Ford Dealer for more information on the sweeping changes made throughout the new Ford line!*

The Ranchero! More than a car, more than a truck—it's a completely new kind of vehicle. A real packhorse that handles more than half a ton!

LOOK again!

They're modern through and through

NEW cabs—completely new—stronger, roomier, smarter! New wider full-wrap windshield. New inboard cab step, new Hi-Dri ventilation, new easy-to-read instrument panels!

NEW hydraulic clutch, standard in all models from Pickups to Tandems. Easier to operate, works like hydraulic brakes. Clutch and brake pedals are suspended type for extra driving ease!

NEW riding comfort! A completely new suspension; big, roomy cabs and better visibility, greatly improved riding and handling ease.

NEW chassis and body strength! New frames, up to 13% stronger. New sturdier front and rear axles! New higher capacity springs! New stronger, more durable cabs.

NEW power advances! New higher horsepower, new freer breathing, new higher compression, new Super Filter air cleaners. New advancements from camshafts to carburetors! Modern Short Stroke design in every engine—V-8 or Six.

NEW F-600 2-tonner has higher horsepower and more rugged chassis construction. More payload capacity than any other 2-tonner.

RD TRUCKS *for* '57

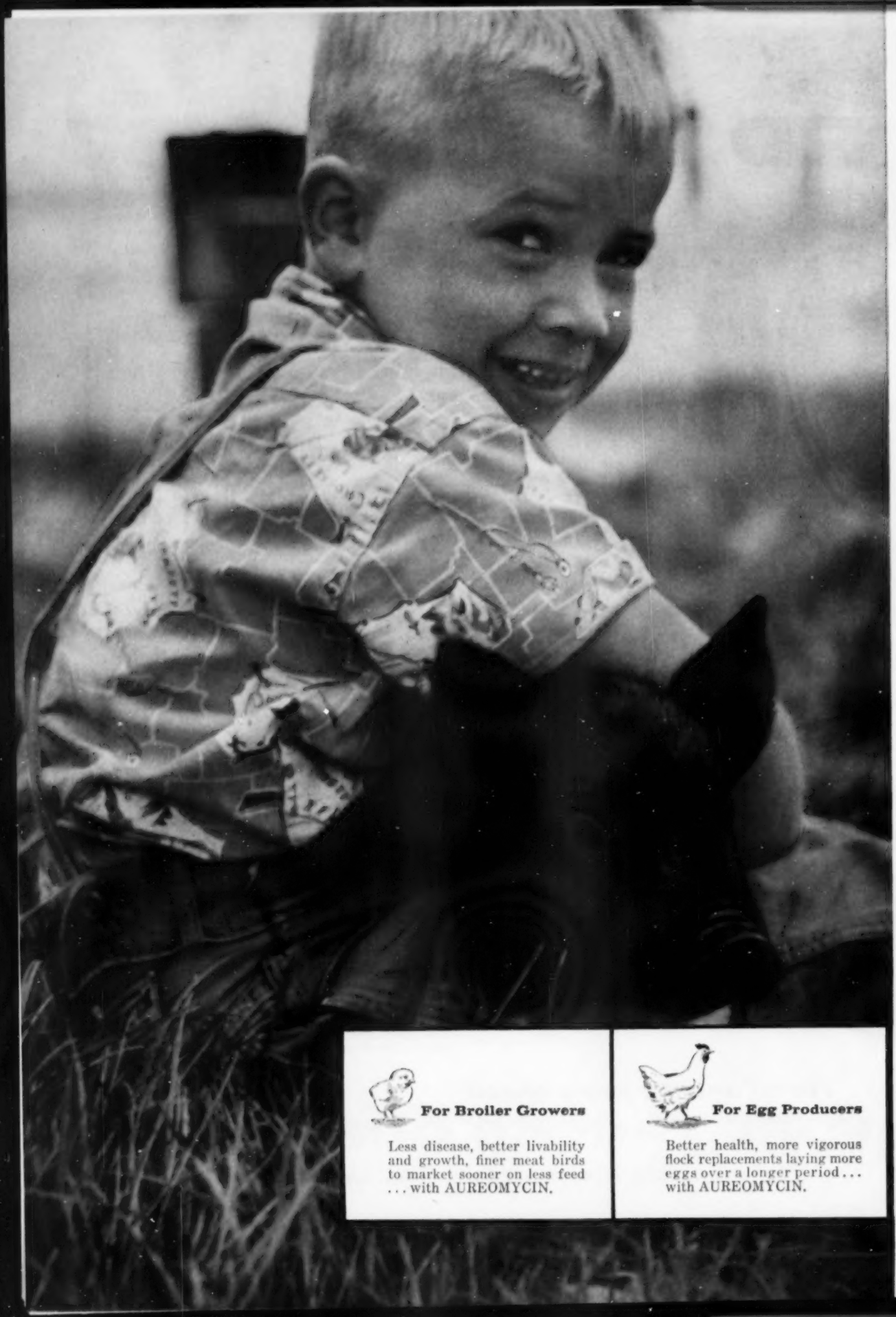
New medium-duty stake trucks for farm work. Choice of modern Short Stroke Six or two V-8 engines. (Series F-500 Ford Truck illustrated)

New Pickup with Styleside body, standard at no extra cost, gives you stunning style and the biggest load-space of any half-tonner. 6½-ft. and 8-ft. bodies.

For '57 and the years ahead-

FORD TRUCKS COST LESS

...LESS TO OWN...LESS TO RUN...LAST LONGER, TOO!



For Broiler Growers

Less disease, better livability and growth, finer meat birds to market sooner on less feed ... with AUREOMYCIN.

For Egg Producers

Better health, more vigorous flock replacements laying more eggs over a longer period ... with AUREOMYCIN.

Healthier pigs, better growth, savings in feed bring more dollars for better farm living

GOOD HEALTH is the key to profitable swine raising.

AUREOMYCIN guards the health of your pigs at every stage of life, helps you turn pigs into pork in the shortest time at the lowest production cost.

No antibiotic equals AUREOMYCIN in its ability to suppress harmful bacteria, prevent disease and promote health. The better an antibiotic does this job – the faster your pigs grow, the less they eat per pound of gain, the more dollar returns for you.

AUREOMYCIN protects your pigs from *invisible* diseases – helps prevent and control *visible* diseases such as enteritis and atrophic rhinitis – keeps your pigs vigorous in times of stresses: castration, vaccination, moving, and weaning.

Keep your pigs on AUREOMYCIN all the way! Let them reach market weight sooner – save two or three weeks feeding time.

AUREOMYCIN is brought to you by American Cyanamid Company in several convenient, useful forms. You can get AUREOMYCIN in good feeds supplied by your feed manufacturer or feed dealer. And, from your veterinarian, feed store or druggist, you can get AUREOMYCIN in the following forms: AUREOMYCIN Soluble and AUROVIM® for use in the drinking water; AUROPEP† Crumbles for prevention and treatment of specific diseases.

* * *

American Cyanamid Company, Farm and Home Division, 30 Rockefeller Plaza, New York 20, N. Y.

†Trade-Mark

More dollars for better farm living with AUREOMYCIN®

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For Cattlemen

Less disease, better gains, more "bloom", more efficient use of feed for cattle . . . with AUREOMYCIN.

For Sheep Raisers

Better weight gains; more "bloom"; fewer losses from enterotoxemia (over-eating disease) with AUREOMYCIN.

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Helpful planning data — in words, pictures, diagrams. Sent free to farmers who plan to build.

Tells how to protect against lightning, fire, wind, snow — how to protect against rot, keep out vermin.

Gives facts on buildings that go up faster, have greater strength, are more convenient, last longer, cost less.

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Dept. O, 4061 W. Burnham St., Milwaukee 1, Wis.
Send me free farm building literature.

Name.....

Address or RR#.....

County.....

City.....State.....

☐ Owner ☐ Tenant ☐ Student ☐ Prospective Dealer

Type of building.....

Why did you buy more land?

Your neighbors say

Dwayne Wilson, Sentinel, Oklahoma: Even with the current high prices for farm land, I consider a farm a good investment. In the near future, a farmer who wants to stay in business will need larger holdings. Prices of machinery and changes in farming methods are making it necessary to farm and think large scale.

Photographs: Dail; Drummond; Ackerson; Alstad

Ernest Burroughs, Contra Costa County, California: We have been buying most of the feed for our dairy herd which includes 500 cows now in milk. Instead of putting so much money into feed, we decided to buy more land and raise more feed. We bought acreage nearby so we can use machinery and labor efficiently.

Max Bird, Cedar Springs, Michigan: I have two boys coming along to assure me of dependable farm labor and I won't need any additional equipment to operate the additional 100 acres I've added to my 342-acre farm. My expansion is based on a beef-dairy operation which can be converted to a strictly cash-crop setup.

Russell Whitehead, Syracuse, Indiana: I bought more land because my daughter got married and my son-in-law wanted to farm. The farm I bought contains 138 acres and lies within a couple of miles of the home farm. My son and I can handle the 160-acre home place.

William Cable, Syracuse, Indiana: I bought another farm because I knew that I could handle more land with the same equipment. The best way for me to reduce my cost of operation was to acquire more land. Also, I could use the available manpower to better advantage.

BEST BUY for Feeders and Dairymen

Big Capacity... Low Cost... Rugged... Versatile

JOHN DEERE
Rotary Chopper

Top: The John Deere Rotary Chopper is pictured chopping alfalfa for the feed bunks.

Left: Just minutes, and you've got a load of cornstalk bedding with the 10 Chopper.

Left: There's nothing to it—just open the rear door and the shredded cornstalks fly out onto the ground behind the John Deere Chopper.

THE WORD IS OUT—you feeders and dairymen can really *make money* with a John Deere 10 Rotary Chopper. Its big capacity, low initial cost, rugged dependability, and versatility combine to handle many jobs at low cost.

Brings Pasture to Cow... Increases Production

The big story is increased milk and meat production. First, the John Deere takes more feed from every acre. Owners report that it takes twice as many acres to pasture their cows as to bring the feed to them with the 10 Chopper. Second, owners report a big jump in production of milk and in beef gains with longer-cut green forage chopped by the John Deere Rotary Chopper.

If that's not enough, the John Deere also chops cornstalks and straw for bedding... shreds and spreads cornstalks and brush . . . picks up and chops windrowed material . . . clips pastures . . . and makes beet leaves into silage—does all these jobs at low cost.

See your John Deere dealer. Ask for a free demonstration. Mail coupon today for free folder.

ASK ABOUT THE JOHN DEERE CREDIT PLAN

SEND FOR FREE LITERATURE

JOHN DEERE • Moline, Illinois • Dept. P 38

Please send me free literature on the versatile John Deere 10 Rotary Chopper.

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JOHN DEERE

"WHEREVER CROPS GROW, THERE'S A GROWING DEMAND FOR JOHN DEERE FARM EQUIPMENT"

Let's take another look at

Culling

Poultrymen's experience with hens in cages has caused the experts to take a new look at culling standards. They agree that culling is just as important as ever. If layers are in cages, record keeping is even more vital to success.

Recent observations show that the "grace period"—the time a layer is allowed to rest before being culled—may need to be extended.

Today's hens bounce back

It is evident that layers, backed by today's high standards of breeding, feeding, and management, are more capable of bouncing back to high production after their natural rest period.

A close look at individual records on thousands of layers also indicates that although these high producers may rest a few days in a row, they continue to lay at a high rate after they come back.

14-day culling too severe

The above observation was strengthened by an experiment conducted in a cage layer unit in Florida involving 2,000 birds. The cages were all filled at the same time with pullets grown in the same flocks. The birds were a high-producing strain. During the first few months in production, 1,000 birds were culled under the 14-day system (individual records were kept and hens were culled if they dropped below 50-percent production for a period of 14 days).

The group culled under the 14-day system showed no production advantage over the nonculled group for the first several months of production. In other words, it appeared that good layers might drop below 50-percent production for 14 days, but come back to good production inside of 28 days.

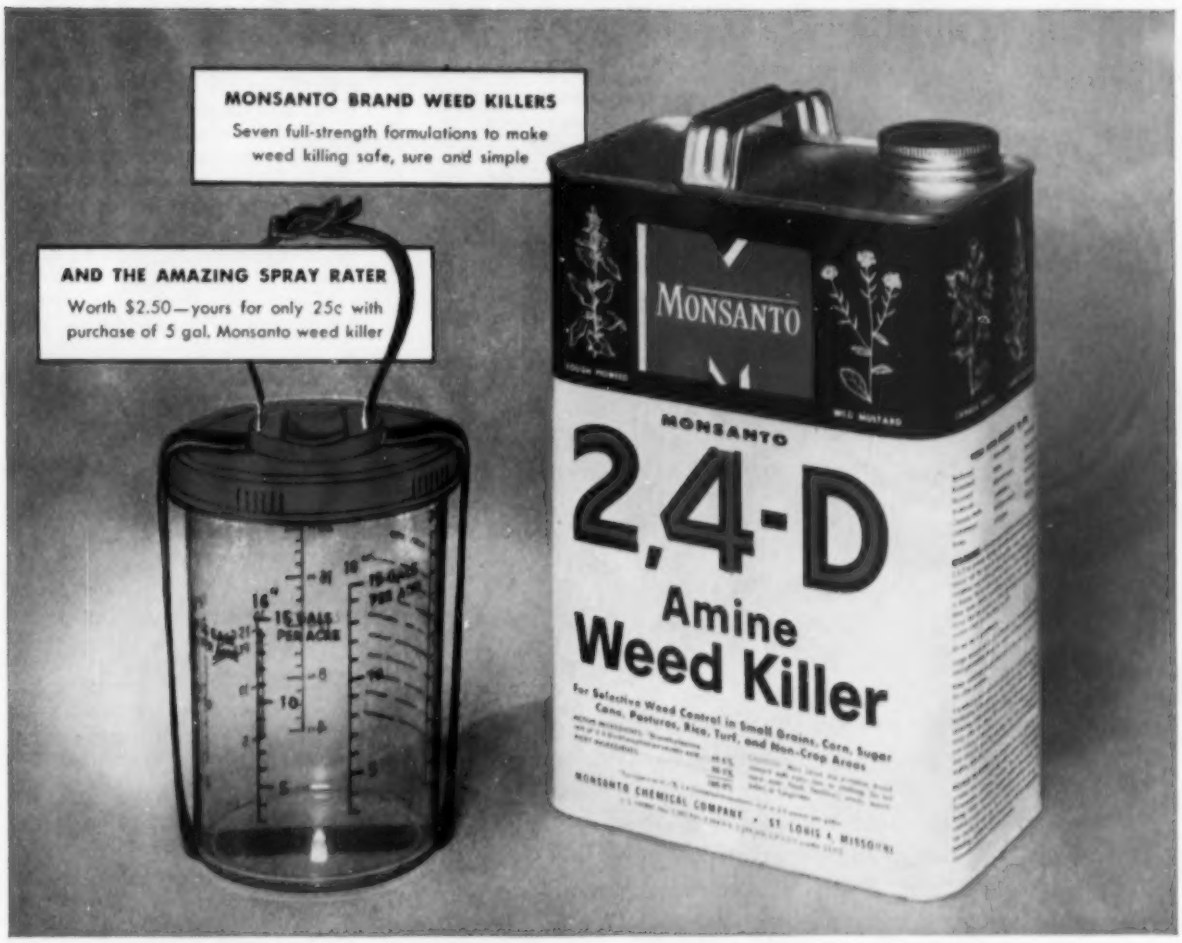
This culling work, which is still continuing, emphasizes that good culling is still vital to egg profits. But it has also resulted in a recommendation to cull caged layers that drop below 50-percent production for at least 28 days, rather than 14.

Advice for floor culling

What does this all mean to the poultryman with a conventional floor operation and no way of keeping individual records on hens? First, he will have to continue a regular day-by-day removal of birds that are obviously out of condition. Secondly, poultrymen with high producing strains probably should delay any overall severe culling until the flock has dropped down below 60 percent.

However, the records on caged hens do emphasize the importance of starting out with strains selected for high production. They also show that good feed, careful management, and sanitation are even more important today to get all the eggs bred into modern strains of layers.

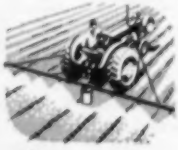
HOTTEST WEED-KILLING TEAM ON THE MARKET TODAY!



THE SPRAY RATER—hottest idea ever to measure spraying rate accurately

New this year—brought to you only by Monsanto—the sturdy plastic SPRAY RATER to show you exactly how many gallons per acre your rig is delivering. A $2.50 value, the SPRAY RATER is yours for 25¢ and the coupons from a 5-gallon purchase of Monsanto weed killer; or 50¢ and 4 gallons; or $1 and 3 gallons; or $1.50 and 2 gallons; or $2 and one gallon. Allow 10 days for delivery of SPRAY RATER—so see your Monsanto dealer early!

1. Strap SPRAY RATER on one nozzle of boom rig.



2. Run rig with full spray over 20 rods.

3. Unstrap, read off rate of spray per acre.

MONSANTO—hottest line of herbicides you can use to kill weeds, improve crops

Safe, sure and simple. Monsanto, the brand you can depend on. Seven powerful, full-strength formulations . . . special wetting agents give you coverage, penetration, sure kill . . . anti-clog agents make use of baking soda unnecessary in hard-water areas. The directions on each container are easy to understand and follow. And don't forget—a valuable SPRAY RATER coupon comes with every can!

Get your weed killers from the dealer who displays the Monsanto sign. He'll have the Monsanto formulation proved best for your crops, best for your locality.

GROW MORE PROFITABLY
MONSANTO
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Buy early so your SPRAY RATER reaches you in time!

Organic Chemicals Division, MONSANTO CHEMICAL COMPANY, St. Louis 1, Missouri

pressure at every faucet

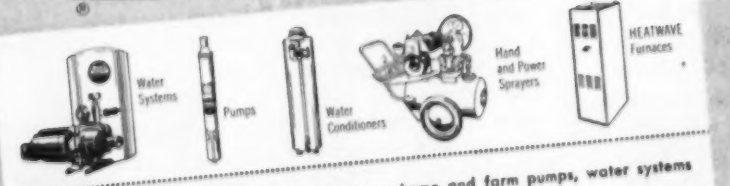
beyond city water mains . . . with a Myers Pump

When the pump on the well is a Myers Ejecto®, plenty of sparkling-clear water is always ready for all the necessities and conveniences of modern, country living. The Ejecto delivers worry-free, economical water pressure because of Myers quality design and construction features, like the one-piece impeller. It's all bronze to resist corrosion . . . perfectly balanced for smooth, quiet operation.

For expert advice in selecting the right type and size of pump, call the nearby Myers full-line water systems dealer.

Myers® Water systems

Myers® Manufacturers of Quality Products since 1870



FREE! Booklet covering full line of Myers home and farm pumps, water systems and softeners. Answers home water supply questions. Write to:
The F. E. Myers & Bro. Co. • 2203 Orange Street, Ashland, Ohio • Kitchener, Ontario.

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Street or Route_____ State_____

City_____

Big litters—

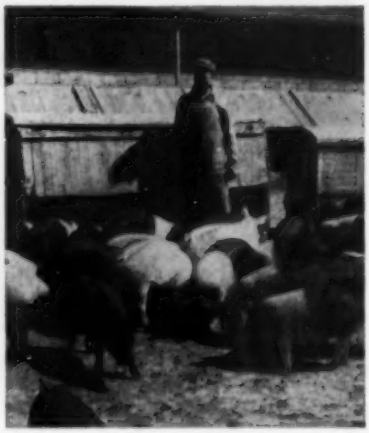
Key to hog profit

Every hog grower would be happy if he could consistently produce an average of 9 pigs per litter. This, Ray Coffel, Bremen, Indiana, has been able to do. His spring average was 9 pigs per litter from 28 sows, one-half of which were gilts. Coffel says his gilts did better than the sows, which was unusual.

Here is how he does it. Coffel attributes his success to early farrowing, farrowing crates, proper feeding, and exercise for the sows. His sows run in the cornstalk field all winter and are fed just enough ear corn to keep them in condition. Farrowing started on January 4 and was completed within 3 weeks.

A few weeks prior to farrowing, the sows are fed ground alfalfa hay produced on the farm and oats containing a protein supplement. The sows ate less than 1 pound of protein supplement per day.

The sows are placed in farrowing crates in a 6-pen push-together farrowing house a day or two before farrowing and



remain in the crates 3 days after farrowing. The crates are 8 feet long, 22 inches wide, and 11 inches off the floor. Coffel thinks the crates should be a little lower for the gilts.

Coffel said "I have the best luck farrowing in cold weather, and I would not think of doing without the farrowing crates. With the crates and heat lamps, I do not stay up with the sows at night." The farrowing house is artificially heated to 65 to 70 degrees when necessary.

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PRICE SPECIALS on FARM TIRES

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53.40* 9-24 4 PLY

SIZE	PLY	PRICE*
10-28	4	72.90
11-38	4	106.15
12-38	6	130.60

*Plus tax and retreadable tire

Bigger cleats—bigger shoulders! Comes on new tractors.

42.75* 9-24 4 PLY

SIZE	PLY	PRICE*
10-28	4	58.30
11-38	4	84.90
12-38	4	88.85

*Plus tax and retreadable tire

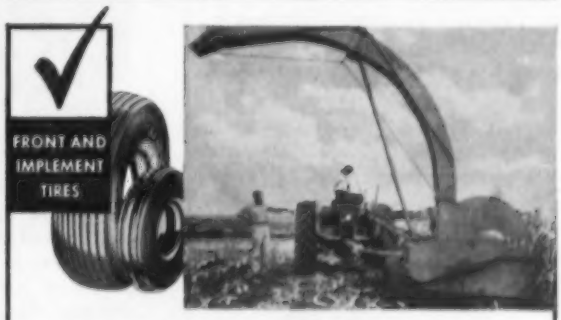
Same tread design that came on new tractors for years!

19.95* 8.00-16 6 PLY

SIZE	PLY	PRICE*
6.50-16	6	28.65
7.00-15	6	34.45
7.50-20	8	61.95

*Plus tax and retreadable tire

Same Wonder Tread design that formerly came on new trucks.



11.90* 4.00-15 4 PLY

*Plus tax and retreadable tire

B.F.Goodrich front tractor—full size, fully guaranteed.

All 4-ply tires

SIZE	PRICE*
5.50-16	14.85
6.00-16	16.55

12.25* 4.00-12 2 PLY

*Plus tax and retreadable tire

Grooved Implement—for all implement and trailer free-rolling wheels.

All 4-ply tires

SIZE	PRICE*
6.00-16	18.90
6.50-16	20.45

TEAR OUT THIS HANDY CHECK LIST OF THE TIRES YOU NEED NOW!

USED TIRES

Big selection for cars, trucks, implements and tractors.

Prices start at only **2.95**

NEW TREADS

For cars, pick-up trucks, wagons.

Prices from **11.70** 6.70-15

Plus tax and retreadable tire

CROP PAYMENT TERMS AVAILABLE on all tires

Look for the THRIFT TAG at your B.F. Goodrich dealer's

B.F.Goodrich FIRST IN RUBBER

Your B.F.Goodrich dealer is listed under Tires in the Yellow Pages of your phone book

you could have danced all night

The wonder of the evening lives on . . : in the magic of the corsage you still hold . . . in the strains of remembered music that run through your head. And you, young lady, were superb! You were radiant! All aglow with gaiety and charm. Nothing could stand in your way, not even "time of the month" difficulties—not since you'd found Tampax.

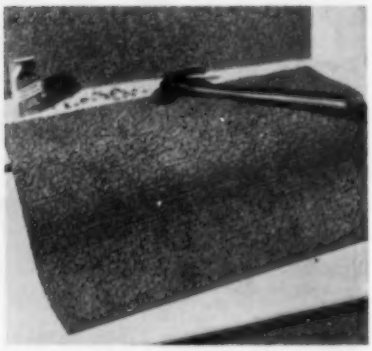
Don't you feel . . . well . . . just a little bit sorry for the girls who haven't discovered Tampax as yet? Imagine pinning yourself into a contraption every single month! Tampax* internal sanitary protection is light and dainty—completely invisible, completely comfortable, when in place. Sitting, standing, dancing or walking, it can't chafe or irritate; in fact you can't even feel it's there! Everything about Tampax is pleasant . . . the way it prevents odor from forming . . . the fact your hands need never touch the Tampax . . . its ease of disposal.

Millions of girls just like you are using and enthusing about Tampax. Choice of three absorbency-sizes (Regular, Super, Junior) wherever drug products are sold. Tampax Incorporated, Palmer, Mass.

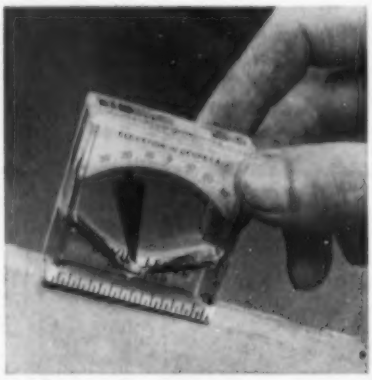
*Reg. U. S. Pat. Off.

What's new in homemaking®

Pocket tool kit is ideal for kitchen cabinet drawer or for the car glove compartment. At hardware stores, $5.95, or ppd. —*Hoffritz For Cutlery, 49 E. 34th St., New York 16, N.Y.*



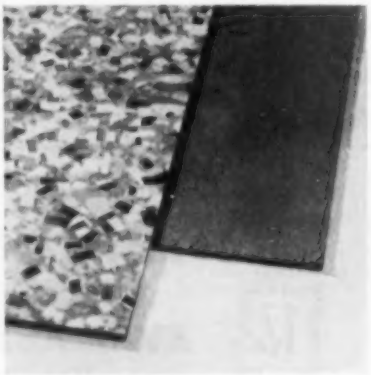
Amtico rubber carpeting is ideal for stairs, halls, landings. Its features—safety, sound deadening, easy cleaning. At dealers, price varies with size.—*American Biltrite Rubber Co., Trenton, N. J.*



Calibrated level for numerous home uses. Store it in a small place. Calibrated dial is easy to read. At hardware stores for $2.—*D. Corrado, Inc., 26 N. Clark St., Chicago 2, Ill.*

Rubber gloves with soft fabric inside for better fit, comfort. At drugstores, supermarkets for 98 cents.—*International Latex Corp., Empire State Bldg., New York, N.Y.*

Photographs: Stanley



Vinyl plastic flooring with foam-rubber backing gives new underfoot comfort and sound-deadening qualities to floor covering. At dealers.—*The Armstrong Cork Co., Lancaster, Pa.*

Plugmold baseboard combines baseboard, electric outlet system, wiring system. Outlets are at 30- or 60-inch intervals. Sold through electrical wholesalers. —*The Wiremold Co., Hartford, Conn.*

Fast, perfect drying . . . indoors . . . can be yours anytime at all with this new, high-speed General Electric Dryer. Your clothes will smell fresh . . . feel soft . . . and be so wrinkle-free you can actually save hours of ironing time every week! See it at your General Electric dealer's soon. General Electric Company, Louisville 1, Kentucky.

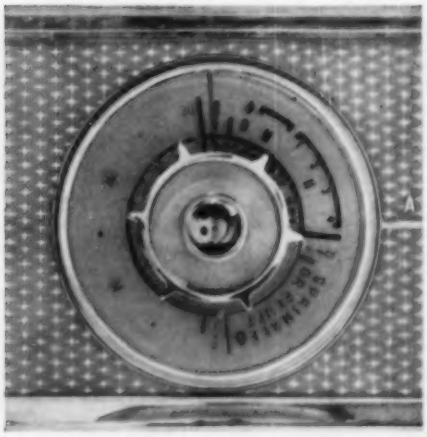
No special wiring necessary! This General Electric Dryer operates automatically on 230 volts or 115 volts.

Dampen clothes for ironing in minutes. Fill Automatic Sprinkler with water—slip into dryer—turn control to SPRINKLE.

Gentle fragrance from General Electric Air Freshener enters air stream and fills clothes with a fresh, breezy-day smell.

Now! Perfect, Automatic Drying for All Washables... with the New 1957 General Electric Dryer!

Dries a typical-sized family wash in less than 35 minutes!



Just one dial to set for perfect results! New Automatic Control adjusts time and temperature to each load—every fabric. Clothes dry quickly, at low, safe temperatures. High-speed air-flow system uses air circulation instead of direct heat.

Foot Pedal opens full-width, magnetic door.

Four colors plus white! Petal Pink, Turquoise Green, Canary Yellow and Woodtone Brown available at slight extra cost.

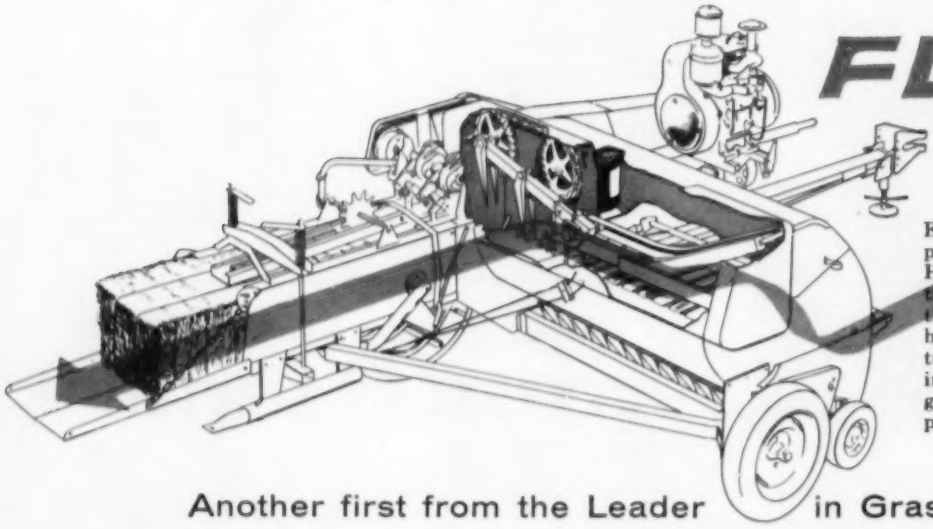
New General Electric Dryer with Automatic Control about $2.70 per week after small down payment. Other high-speed General Electric Dryers start at approximately $149.95.

Prices subject to local variation. See your local dealer for his prices and terms.

Progress Is Our Most Important Product

GENERAL ELECTRIC

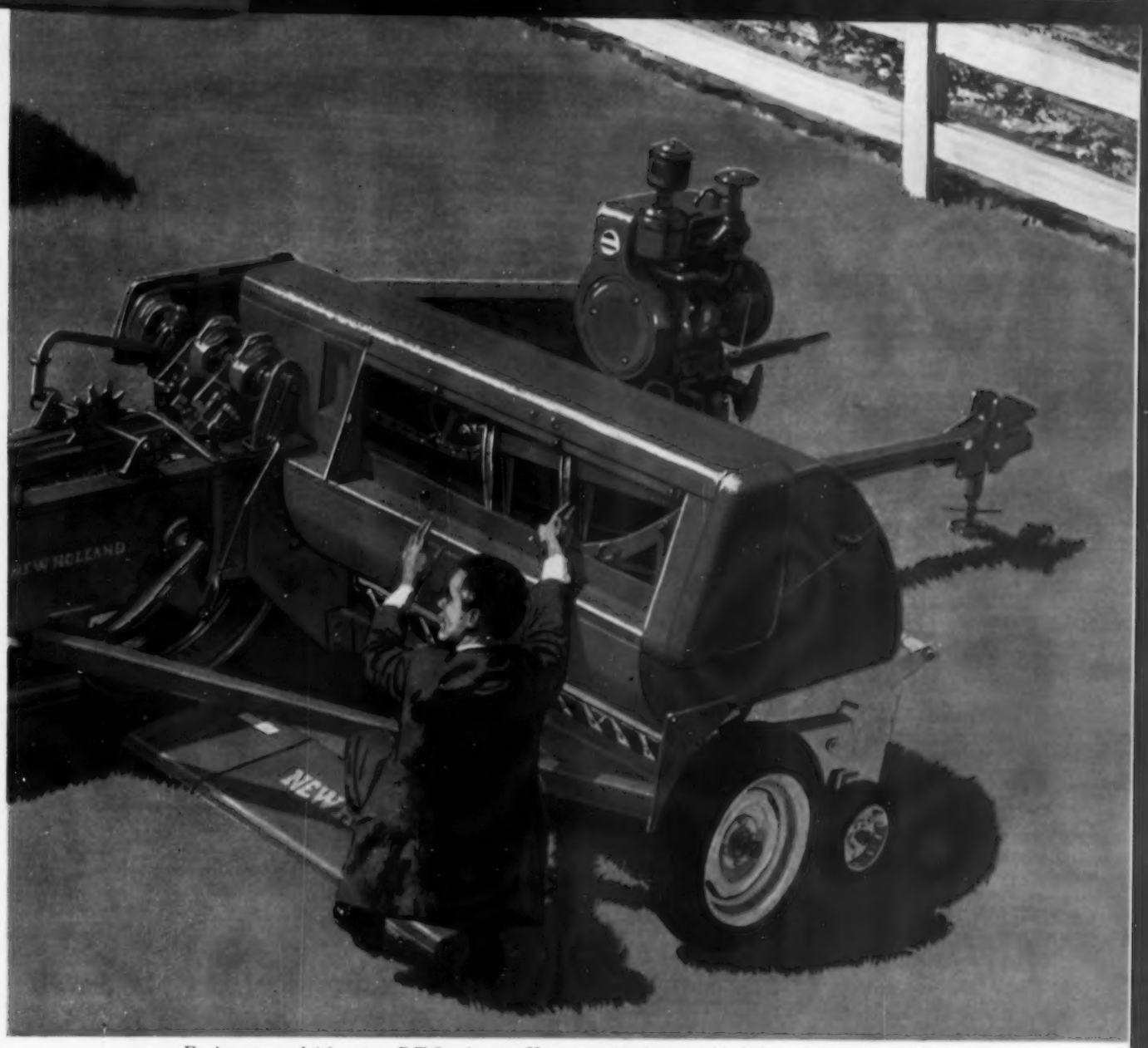
The new HAY FLOW—



This is FLOW-ACTION!

Exclusive new operating principle developed by New Holland and found only on the new HAYLINER 68. It's the best friend a leaf ever had! No sharp corners to turn, no twisting and turning, no wadding—just a gentle, flowing action from pickup to bale chamber.

Another first from the Leader in Grassland Farming



Engine-powered (above) or P.T.O., the new HAYLINER 68 gives you big-baler capacity at small-baler price.

LINER 68 with —ACTION!

Have you seen the new way to bale hay? Never before has there been anything like it—the New Holland HAYLINER 68!

Completely new from hitch to chute, the HAYLINER 68 gives you big-baler capacity with the low price and handling ease of much smaller balers. How's it done? The secret's in FLOW-ACTION. It's an entirely new way of moving hay from field to finished bale. It hardly disturbs a leaf. No auger. No wadboard. Just a smooth, gentle flowing action.

The HAYLINER 68 handles your hay less because it has fewer moving parts. It puts the most feed value into every bale.

And look at the way the bale is built—square, cleanly sliced. Easy to stack. Easy to feed out.

You don't have to wait until summer to see FLOW-ACTION in action. Your dealer can demonstrate it *right now* in his showroom or on his lot. Hurry down today! New Holland Machine Co. Division of Sperry Rand Corp., New Holland, Pa.

NEW HOLLAND

The dashing new Corvette (left) and the Bel Air Sport Coupe.

Chevy puts the purr in performance!

That new V8 in the '57 Chevrolet is as quiet as a contented cat and as smooth as cream. And it's cat-quick in response when you ask for action!

Just nudge the accelerator, and it pours out the kind of velvety action that helps you be a surer, safer driver at all times. Its right-now response keeps you out of unexpected highway emergencies. And it overpowers steep hills with such ease they seem like level landscape.

New Chevrolet V8 engine options put up to 245* high-compression horsepower under your command. With 283 cubic inches of displacement, this V8 is a new, bigger and better edition of the engines that have put Chevrolet at the top of the performance ladder. It's sassy, sure—but as tame to your touch as a purring pussycat.

Try the smoothest V8 you ever put a toe to, and all the good things that go with it. Like new Turboglide—the first and only triple-turbine automatic drive (an extra-cost option). And Chevy's own special sweet and solid way of going. Stop by your Chevrolet dealer's. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

1 USA
'57 CHEVROLET

**270-h.p. high-performance engine also available at extra cost. Also Ramjet fuel injection engines with up to 283 h.p.*

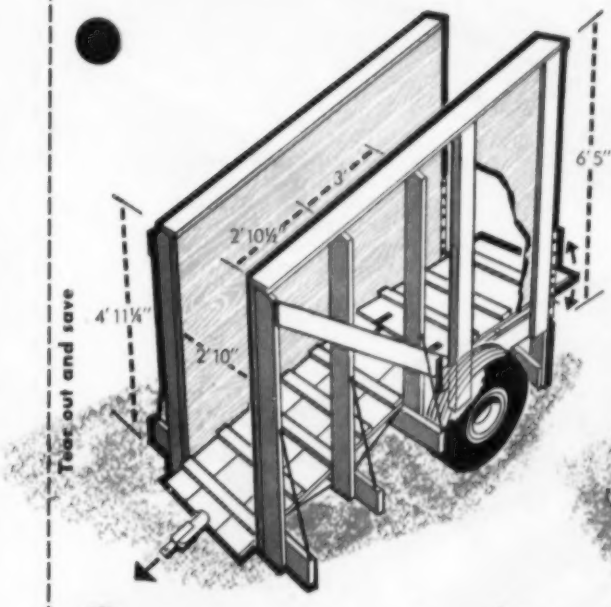
SUCCESSFUL FARMING SPECIAL SERVICE FEATURE

Portable livestock equipment

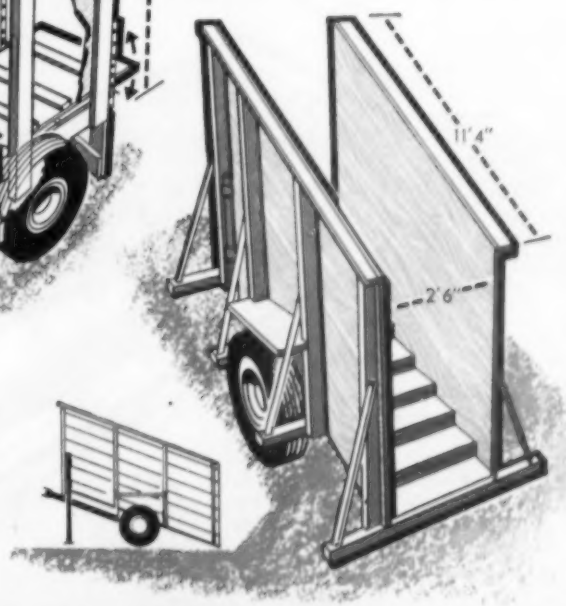
By S. S. DeForest

The plans here are some farmers request most frequently. Order Midwest Plans from Agricultural Engineering Extension Service at Fayetteville, Arkansas; Urbana, Illinois; Lafayette, Indiana; Ames, Iowa; Manhattan, Kansas; St. Paul, Minnesota; East Lansing, Michigan; Columbia, Missouri; Lincoln, Nebraska; Fargo, North Dakota; State College, New Mexico; Columbus, Ohio; Stillwater, Oklahoma; Brookings, South Dakota; Madison, Wisconsin.

LOADING EQUIPMENT

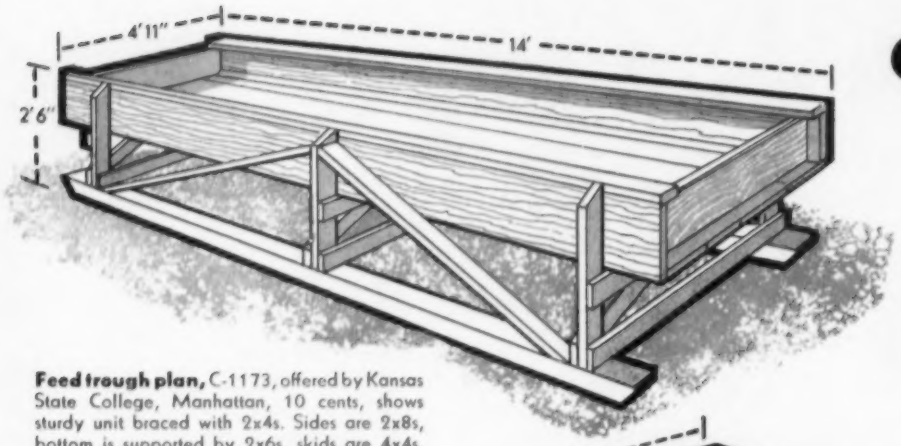


Movable loading chute has adjustable floor for variable truck heights. Tongue telescopes, legs fold up for transporting. It is Midwest Plan 87340. Send 25 cents to one of colleges listed above

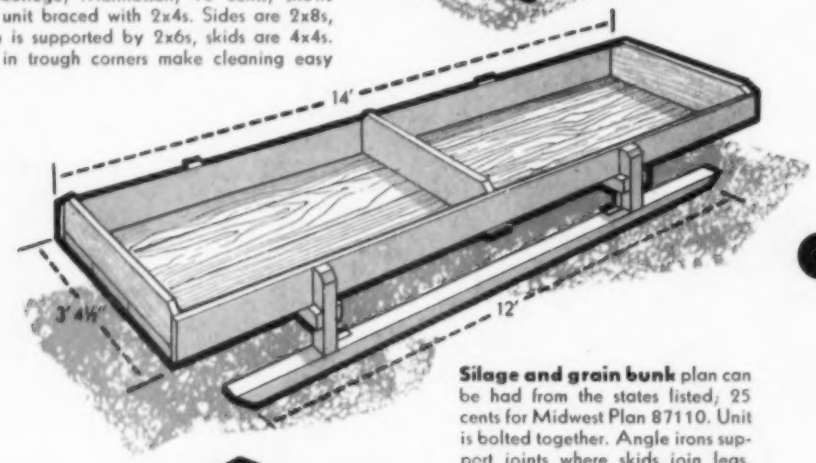


Stair-step loading chute uses steps instead of cleated ramp. Livestock use it easily. Tongue removes when unit is in use, legs telescope. It's Midwest Plan 87341, from one of states above. Cost is 25 cents

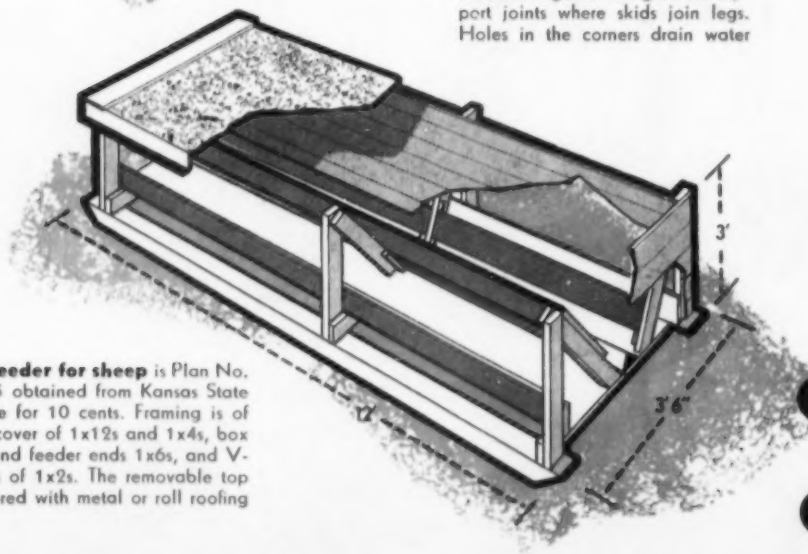
Tear out and save



Feed trough plan, C-1173, offered by Kansas State College, Manhattan, 10 cents, shows sturdy unit braced with 2x4s. Sides are 2x8s, bottom is supported by 2x6s, skids are 4x4s. Fillets in trough corners make cleaning easy



Silage and grain bunk plan can be had from the states listed; 25 cents for Midwest Plan 87110. Unit is bolted together. Angle irons support joints where skids join legs. Holes in the corners drain water

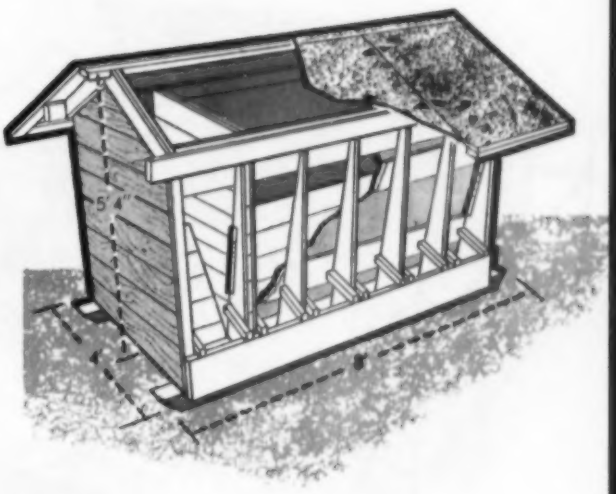


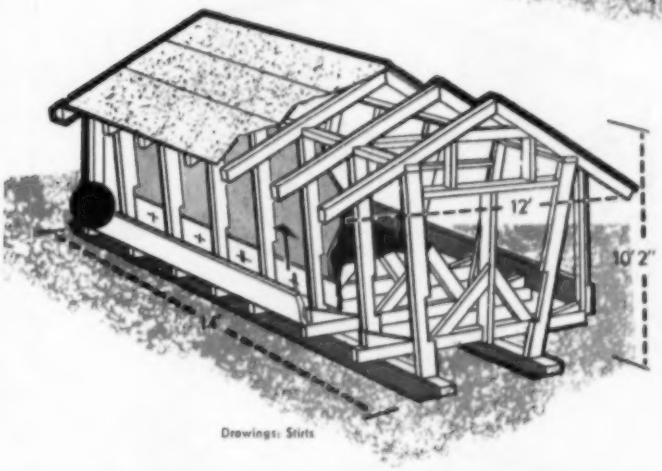
Self-feeder for sheep is Plan No. 77-525 obtained from Kansas State College for 10 cents. Framing is of 2x4s, cover of 1x12s and 1x4s, box sides and feeder ends 1x6s, and V-bottom of 1x2s. The removable top is covered with metal or roll roofing

A 50-bushel hog self-feeder plan can be purchased for 25 cents from the states on first page. It's Midwest Plan 87311.

Unit has separate bin for supplement. Adjustable panels raise or lower to regulate feed flow. Hinged doors allow easy filling.

Frame for inverted V is 1'8" high and 25" wide at bottom.





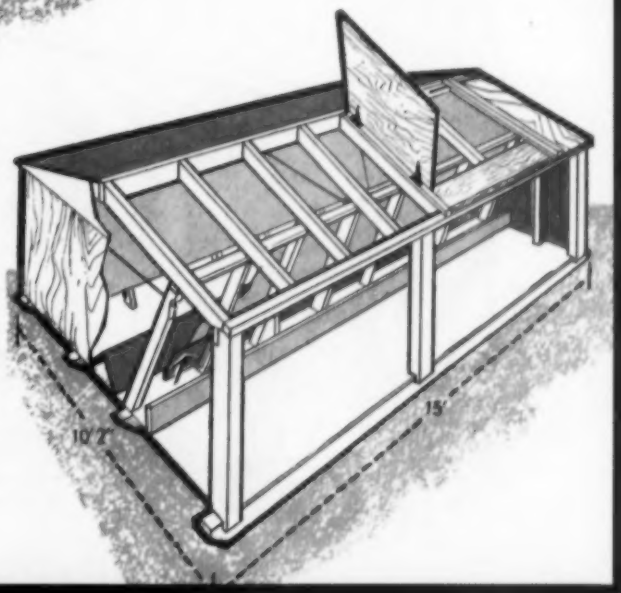
Drawings: Stirts

Cattle self-feeder, taken from Plan 470-1, was designed by agricultural engineers at University of Illinois, Urbana. Price of plans is 25 cents. Write to the university for a set.

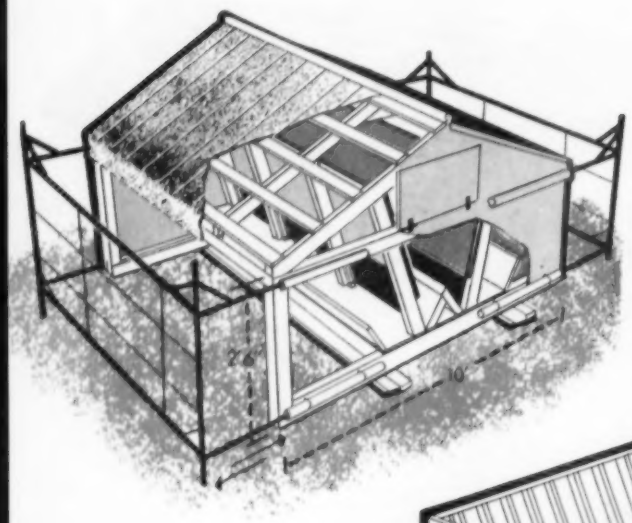
Sloping side walls are 5' apart from outside edge to outside edge at bottom and 7' at top. The V frame, of 2x4s 3'4" long, is covered with 1x12s, tongue and groove. Skids are 6x8s.

This 300-bushel hog feeder is built of plywood from Midwest Plan 77613. Send 25 cents to colleges on first yellow page for it.

Two center 4"x6" skids are 2' 8" apart and support main weight of feed. Slanted 2x4 studs meet rafters 3' 9½" from ridge. Inverted V is made of two 1x12 boards at right angle. Rafters are 5'11" long, extend roof over floor supported by 2x4s laid flat, 2' apart.

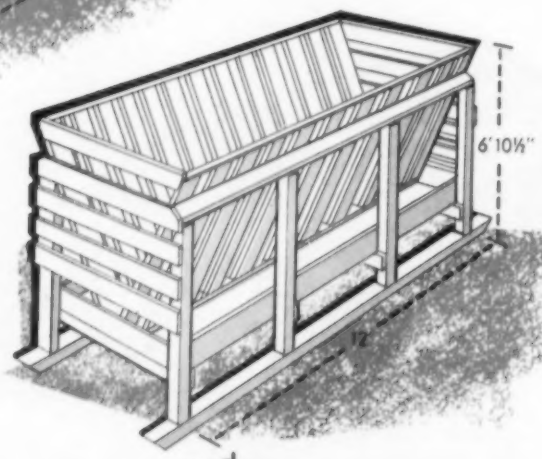


FEEDING EQUIPMENT



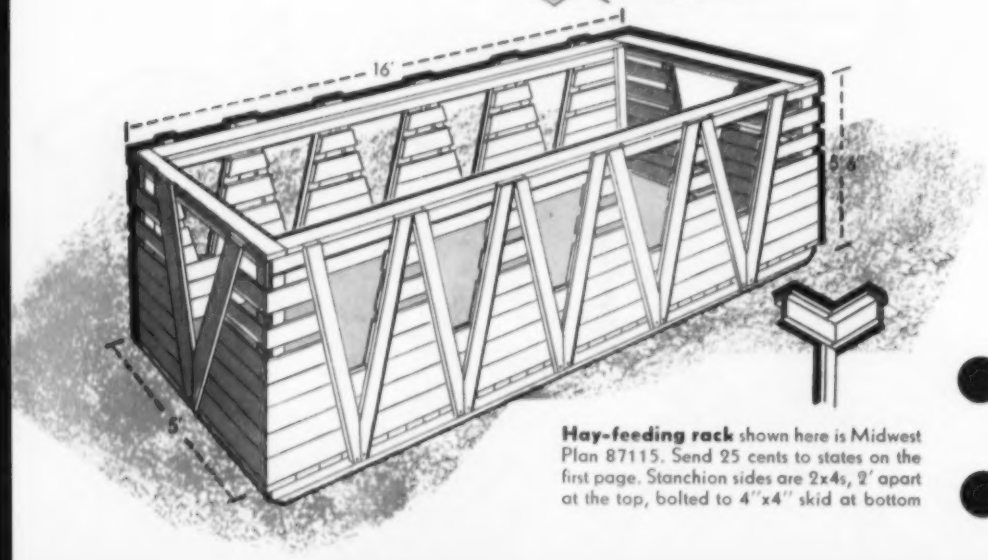
Calf-creep feeder holding 550 bushels can be built from Midwest Plan 87114 bought from states on first page for 25 cents.

Big feature is adjustable creep made of 1½" and 2" pipe. Pins hold creep in position. Slanting sides of feeder are 1' 2" apart at bottom, bolt to 5' 6" long 2x4 rafter at mid-point. Inverted V is 2x8s placed at right angles.



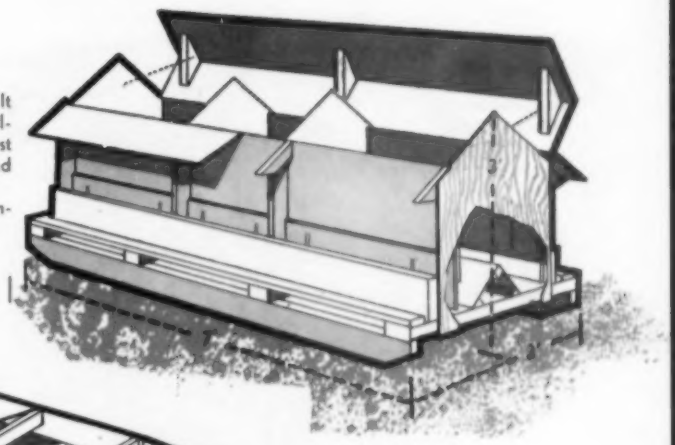
Movable hay-feeding rack, built from University of Illinois Plan 422-1, is rack and bunk.

Skids and legs are 4x4s, trough is of 1x6s and 1x8s, slats and lengthwise framing is of 2x4s, cross members are 2x8s. Send 25 cents to the university at Urbana.



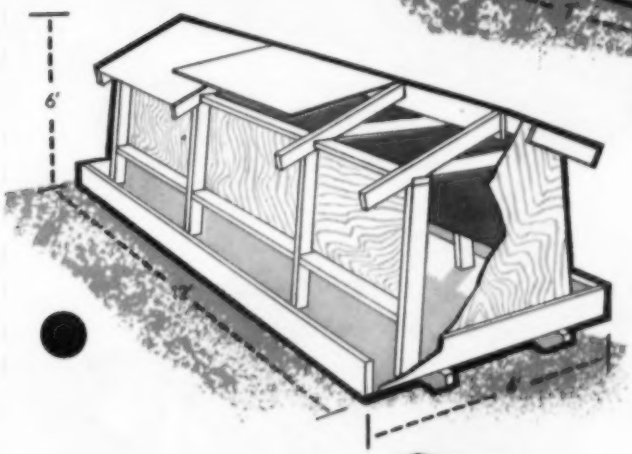
Hay-feeding rack shown here is Midwest Plan 87115. Send 25 cents to states on the first page. Stanchion sides are 2x4s, 2' apart at the top, bolted to 4"x4" skid at bottom

FEEDING EQUIPMENT

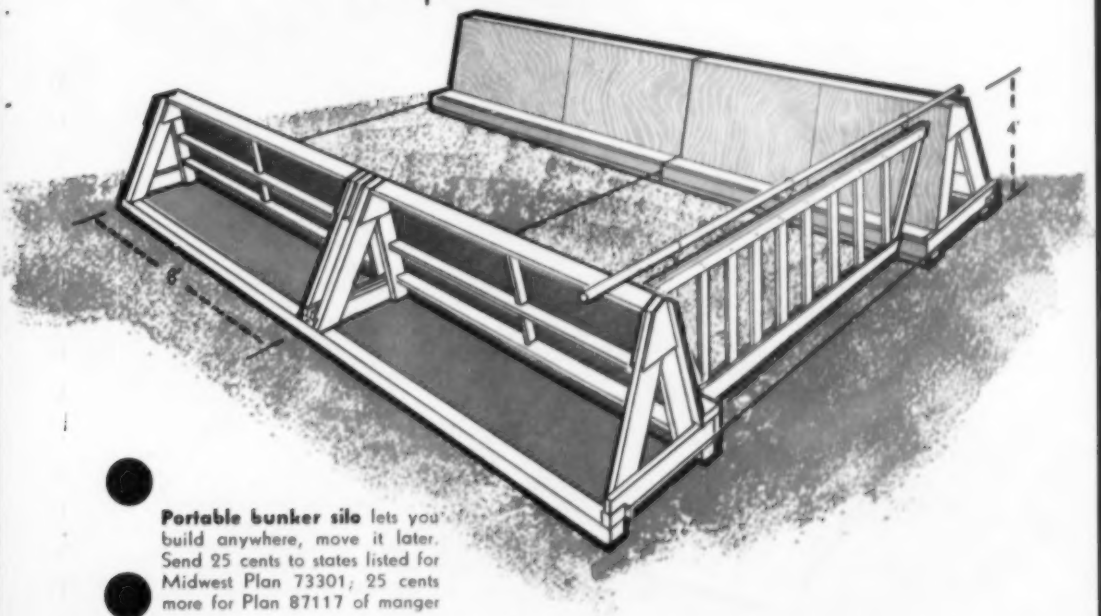


Poultry range feeder is built from Midwest Plan 87410, available for 25 cents from states on first page. It's built with plywood and fastened with casein glue.

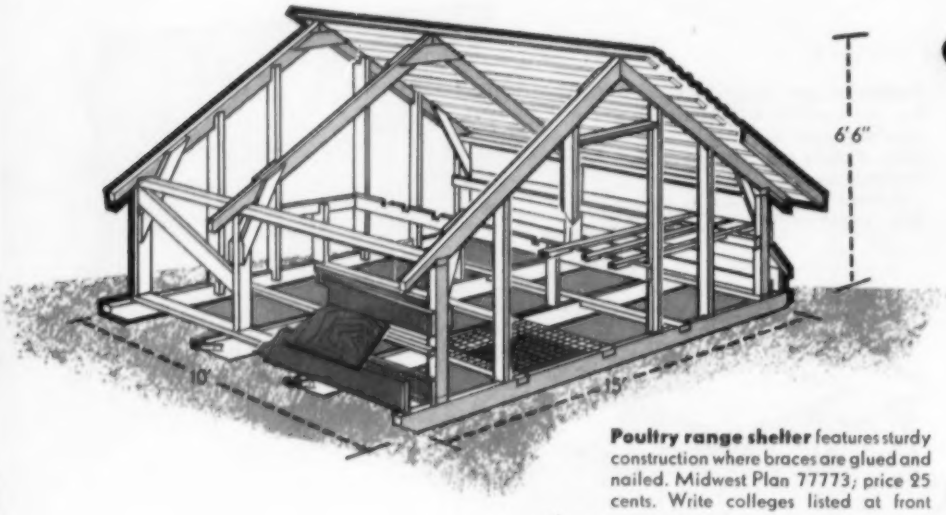
Inverted V has 8" sides at angles. Capacity — 16 cubic feet.



A sheep chopped-hay feeder plan is free from the North Dakota Agricultural College, Fargo. Sides are 3' 6" apart at top, 4' apart at bottom to let chopped hay slide down without bridging. An inverted V is not needed at the bottom



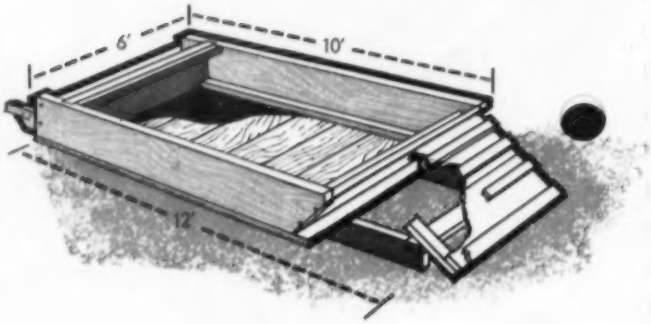
Portable bunker silo lets you build anywhere, move it later. Send 25 cents to states listed for Midwest Plan 73301; 25 cents more for Plan 87117 of manger

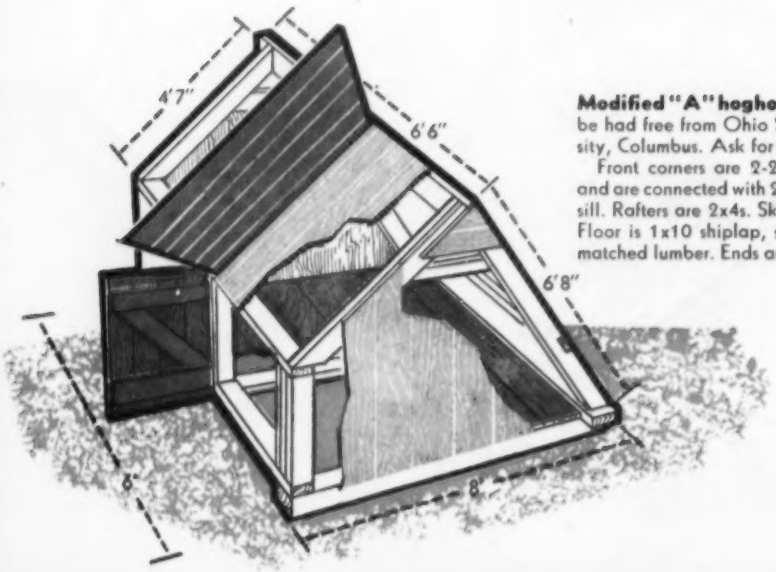


Poultry range shelter features sturdy construction where braces are glued and nailed. Midwest Plan 77773; price 25 cents. Write colleges listed at front

Movable hog wallow, Midwest Plan 87380, is bought from states listed on first page for 25 cents.

Unit rides on 4"x6" skids and is built with 2"x12" boards on ends, sides, and bottom. A 2"x2" strip around top, inside, prevents water spilling out. Half-inch tie rods, 6'1" long, across ends hold sides tightly. Bottom is mopped with tar.

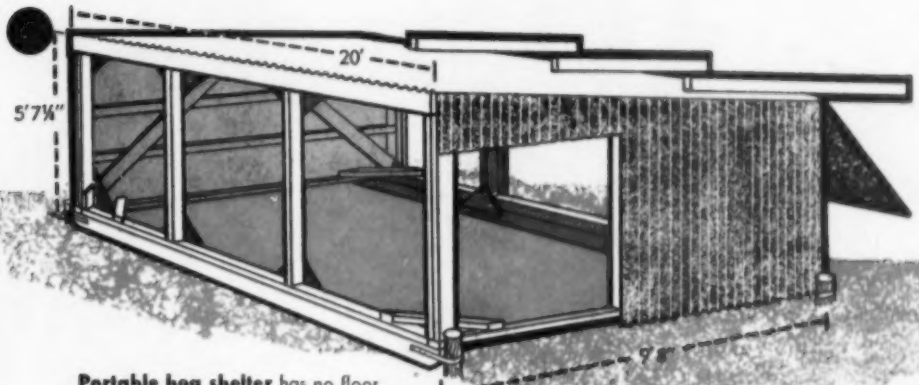




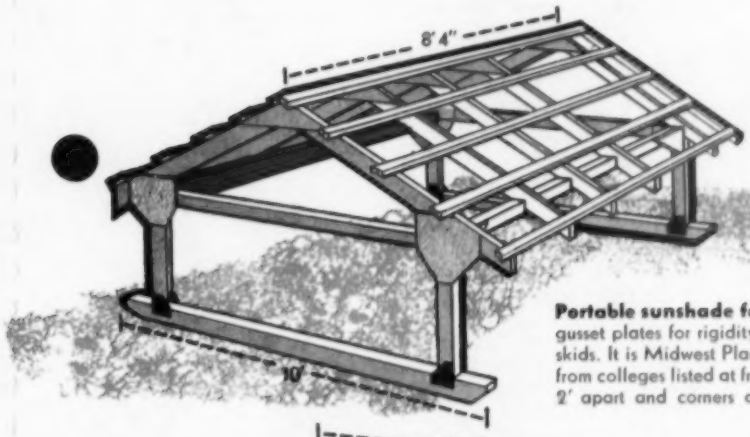
Modified "A" hoghouse plan can be had free from Ohio State University, Columbus. Ask for Plan 72602.

Front corners are 2-2x4s, 2' long and are connected with 2x4 plate and sill. Rafters are 2x4s. Skids are 4x4s. Floor is 1x10 shiplap, siding is 1x6 matched lumber. Ends are ventilated.

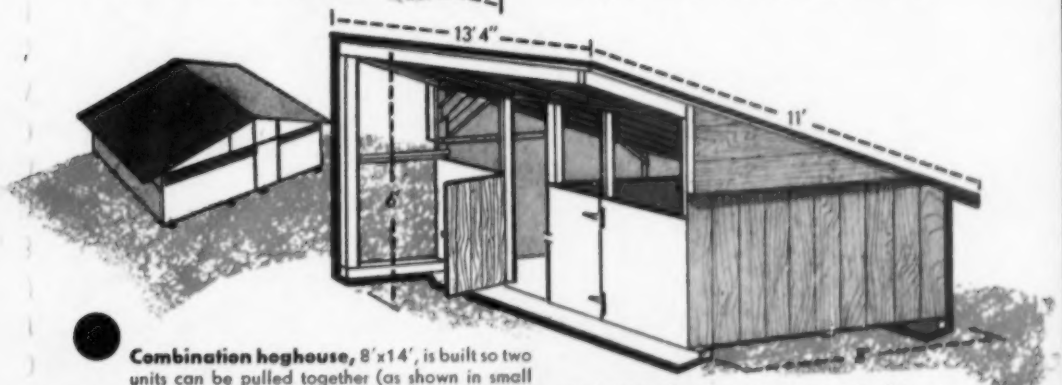
SHELTER EQUIPMENT



Portable hog shelter has no floor. Back raises for shade. Send 25 cents for Plan 5082, Agricultural Extension Service, Iowa State College, Ames

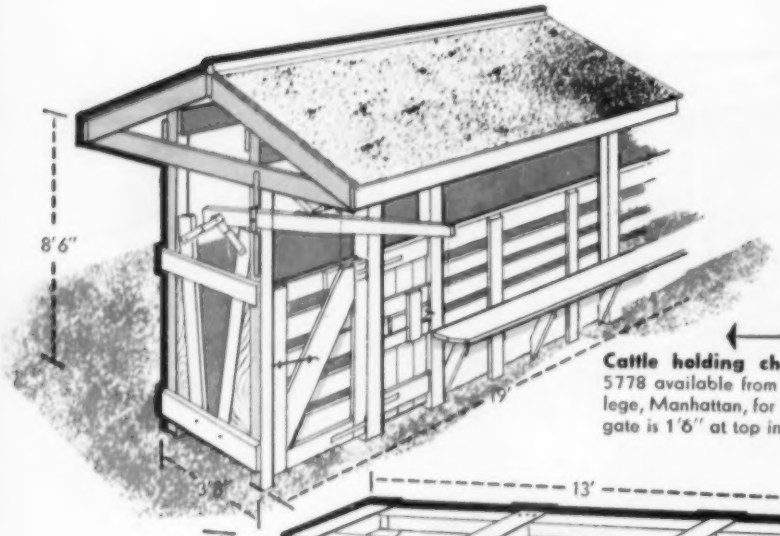


Portable sunshade for hogs has glued gusset plates for rigidity, metal gussets at skids. It is Midwest Plan 72690; 25 cents from colleges listed at front. The rafters are 2' apart and corners are 2x4s, doubled

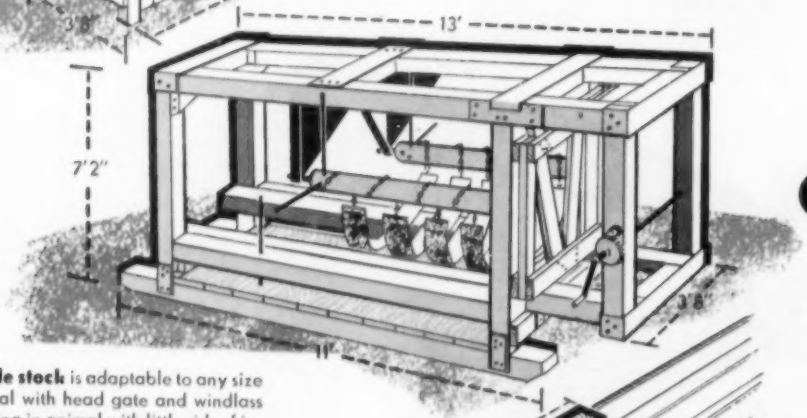


Combination hoghouse, 8'x14', is built so two units can be pulled together (as shown in small drawing) for winter farrowing. Unit is well braced for frequent moving over rough ground. Doors latch back against projected end when units are used singly. Framing is 2x4 material, all bracing 1x4, glued and nailed. Send 50 cents to the colleges listed at front for Midwest Plan 72649

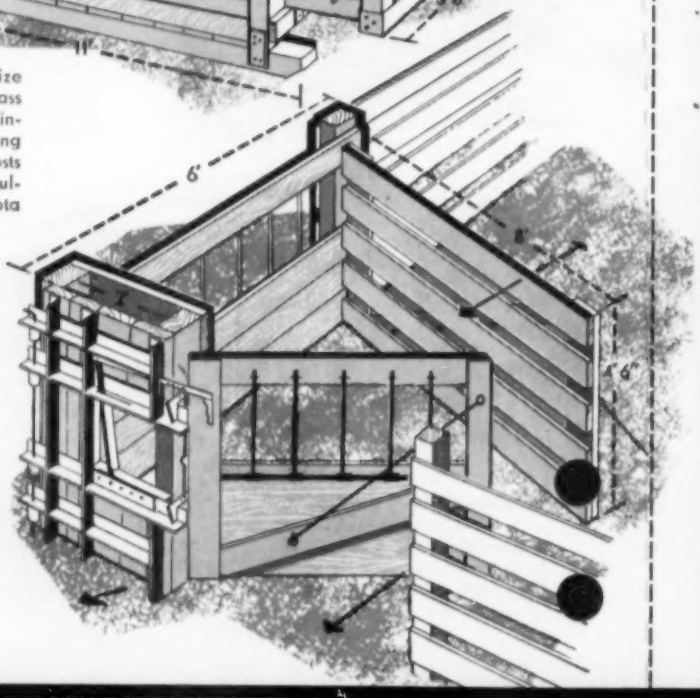
HOLDING EQUIPMENT



Cattle holding chute is Plan No. 5778 available from Kansas State College, Manhattan, for 15 cents. The head gate is 1'6" at top in the open position



Cattle stock is adaptable to any size animal with head gate and windlass to bring in animal with little risk of injury. Roping pins are for anchoring legs of animals. Plan 774-3-1 costs 25 cents from North Dakota Agricultural College, Fargo, North Dakota



Cattle squeeze chute has a swinging head gate to let animals out. It's also removable by pulling rod. Neck squeeze operates with iron, notched for securing.

Unit is placed in corner of corral so gates, when not in squeezing position, fold back. Rods hold gates in squeeze-chute position. Purchase Plan 10.776-15 from College of Agriculture, University of Nebraska, Lincoln, for 25 cents.

Nationwide egg checkoff starts in March

About 3 eggs per case is what March checkoff costs producer. That is what egg dealer Roscoe Hill (right) is explaining to producer Merle Severe, Palmyra, Nebraska

Photograph: Hufnagle

If your sales slip for the first eggs you market during March shows a 10-cents-a-case deduction, you will be one of the thousands of poultrymen taking part in the first nationwide egg checkoff.

In fact, you probably received pamphlets from your egg dealer during February describing the program and giving you the opportunity *not* to take part in the self-help, voluntary program. However, if you feel an intensified promotion program *will* expand your egg market, then you will be one of many to accept the automatic deduction from your egg check.

Costwise, the egg dealer also has an investment in the program—the cost of publicizing the checkoff and the extra bookkeeping expense of making your deduction and then sending it to your state committee representing the Poultry and Egg National Board.

This method of collecting money to step up the PENB's promotional activities was launched on a trial basis in 13 states last May. If you're a poultry producer in one of these states—Connecticut, Kansas, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, North Carolina, Pennsylvania, Rhode Island, South Carolina, Utah, or Wisconsin—you may be one of the several thousand poultrymen who contributed a total of $42,000 last year.

The PENB Egg Advisory Committee, headed by Dr. J. C. Huttar of Ithaca, New York, believes the checkoff is a workable means of financing an expanded promotional program. Where the aims and purposes of last year's checkoff was understood, producer support was enthusiastic.

The farmer's awareness of the narrow margin of profit in selling eggs has whetted his interest in broadening his markets. And the recent announcement by the U.S.D.A., revising previous figures and reporting a decline in the per-capita consumption of eggs, focused the industry's attention toward this problem. The U.S.D.A.'s annual estimate, based on the 1954 census of agriculture, reported we each ate 366 eggs instead of the previously reported 417 eggs for 1955, significantly less than the 387 per-capita consumption of eggs in 1951.

Past records would indicate the poultry and egg industry has been capturing its share of the food dollar. Agriculture Marketing Service figures comparing 1955 with the period 1935-39 show that this industry is farming's fastest-growing segment. Poultry and egg marketings were up 93.6 percent; meat animals, 65.2 percent; dairy products, 21.6 percent; and total food crops, 26 percent.

And comparing these food products for consumer popularity during this same [*Turn to page 99*

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What's new

Tips you can use today

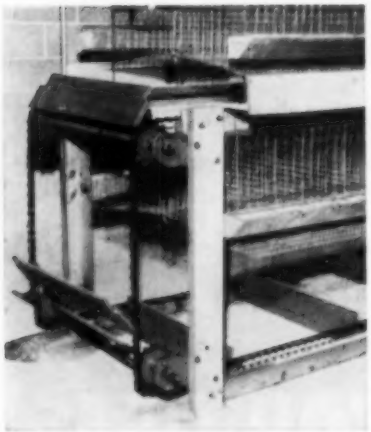
New plow. Four-bottom plow has spring-trip beams to allow bottoms to swing out of way if an obstruction is hit. Removing 4 bolts and one beam makes plow a 3-bottom one. Frame is tubular, beams are fabricated.—*International Harvester Co., 180 N. Michigan Ave., Chicago 1, Ill.*

A level. To level two points, attach hose to gauges, fill with water. After water seeks its own level, place gauges together, mark level with washers. Put gauge on each point to be leveled and adjust one so the water level is at the washer settings. *Level-Rite, Granby, Conn.*

in farming®

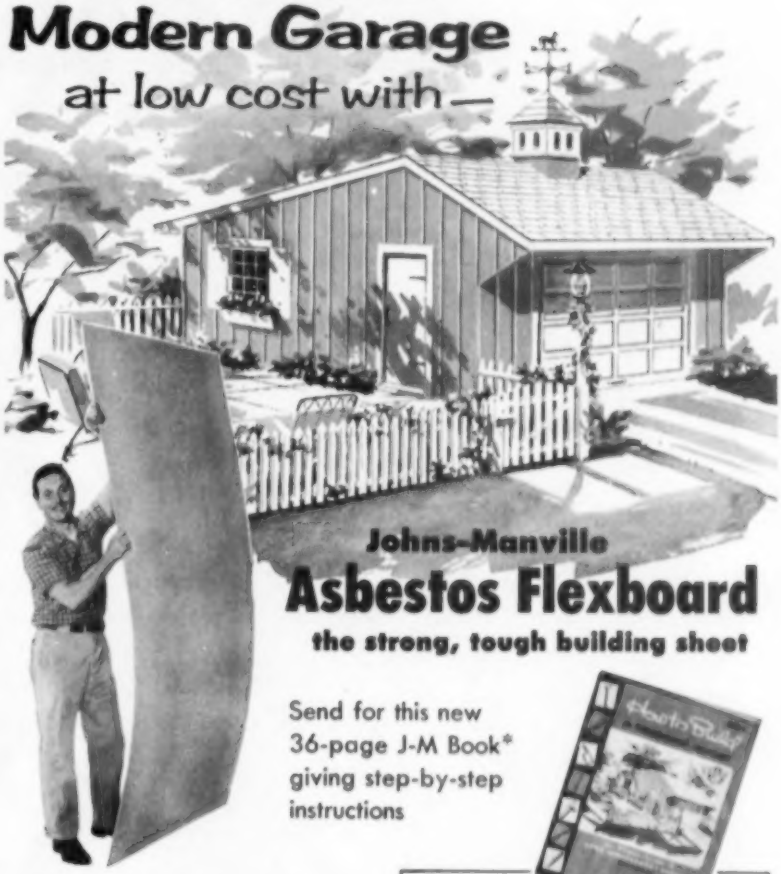
Corn harvester. Equipped with only one main working part, this machine does not use gathering chains to move material to cylinder. Unit is offset so chopper runs in untrampled growth. Unit won't clog with weeds found between rows, it is said.—*Lundell Mfg. Co., Cherokee, Iowa.*

Liquid fertilizer attachment. Tanks above wheels let liquid flow by gravity through metering heads which can be adjusted for amounts between 100 and 525 pounds of fertilizer an acre, planting 40" rows, at 4 mph. Sediment jars, screens filter liquid.—*John Deere, Moline, Ill.*



Droppings-pit cleaner. Kit contains gears, shafts, paddles, chain, bearings to assemble conveyer. Lower pit cleans first. Paddles pass over droppings at top but clean when motor is reversed. A 1-hp motor drives unit through gear-reduction mechanism.—*Innes Co., Bettendorf, Iowa.*

How to build a
Modern Garage
at low cost with—



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U.S.D.A. photograph by Forsythe

In this annual report from the secretary of agriculture, Mr. Benson reviews progress of the past year and prospects ahead for solving agriculture's biggest problem:

"Helping farmers gain their fair share of the national income"

HERE ARE THE ANSWERS to questions asked of Secretary Benson by Wayne E. Swegle, associate editor of Successful Farming, in a recent interview concerning agriculture's current problems:

Q. *About a year ago you told me the main job ahead was "disposal of the surpluses acquired during the years of high, rigid support prices." How have we progressed on that job in the last year?*

A. Very well. Surplus disposal during the last fiscal year totaled $2.7 billion, the highest on record. However, we are not satisfied. We expect to exceed this level substantially in this fiscal year, and with sales for dollars a large proportion of the total. Actually, since July 1, 1953, commodities costing more than $6 billion have been moved out of C.C.C. inventory by sale, barter, and donation.

It is worthwhile to note that of the approximately $5 billion C.C.C. has received for these commodities, nearly $3⅓ billion, or roughly 66 percent of the total, have been received through actual sales for dollars.

These surpluses were built up over a period of years. Obviously it is going to take some time to eliminate them and take this price-depressing burden off the backs of farmers.

Q. *What were other major successes of your department last year?*

A. The major successes of the department last year were:

a. Reversal of the long-time drop in farm operators' net income.

b. The tremendous increase in exports of agricultural commodities.

c. Passage and implementation of the Soil Bank Act.

d. Increased research activities.

e. Steps taken to avoid bypassing the private marketing system.

f. Development of the special program for rural areas of low income.

g. The Great Plains program for better land use in the area between the prairies and the Rocky Mountains.

Q. *What are the main problems facing agriculture today?*

A. The main problem facing agriculture today is helping farmers gain their fair share of the national income. Some of our difficulties are due primarily to:

(1) The tremendous surpluses still exerting downward pressures on prices and income.

(2) Loss of markets to synthetics and foreign competitors due to unwise pricing policies.

Other needed steps are:

(1) To loosen the bonds of the [*Turn to page 80*

This is how

Preparing sows

A month before farrowing time, McCutchan brings sows to this wooded lot. Two to 3 days before farrowing, the sows are moved to one of the four growing houses and held in stalls. For each month's farrowing, only 2 of the 4 houses are used.

When sows show signs of farrowing they are moved to farrowing house. He gives pigs sod and iron pills when 4 days of age to prevent anemia, vaccinates for cholera at 2 to 3 weeks, and worms them at 12 weeks.

"I switched to multiple farrowing for $3,800"

. . . says Jim McCutchan, Russellville, Indiana, commercial hog producer. He farrows 15 to 20 sows each month to reach his production goal of 2,000 pigs

By Mike O'Hara

If you've ruled out multiple farrowing because of initial cost of setting up shop, you may want to reconsider this means of expanding your hog operation.

Jim McCutchan built 5 farrowing-growing houses (20'x30'), 3 sheds (13'x24'), and a 33'x75' concrete floor for a cost of $3,800. This figures less than $2 per head for the 2,000 hogs farrowed annually by this system (see illustration).

The $600 cost of each of the 5 farrowing houses includes wiring, plumbing, panels, hog waterers, troughs, and heat lamps. But to keep costs down, he used native lumber for all construction except the siding. Time required to build—3 men less than 3 days.

The 3 sheds which provide shelter for weanling pigs and the concrete feeding floor cost $800.

Breeding program begins with the weaning of the pigs at 3 to 3½ weeks. The sows are then put in a dry lot and fed for 2 days a limited feed of corn and water. Next, the sows are flushed by feeding all the protein and corn they want for 4 to 5 days. Sows come in heat immediately and at about the same time.

"It is the exception to the rule," says McCutchan, "if 3 boars don't get all of the 15 to 20 sows bred during a 5-day interval."

For replacement stock, he culls out 20 to 30 old sows a year and brings in this many gilts. But to make this shift, he turns 3 boars in with 40 to 50 gilts and culls down to the number desired—usually 20 to 30 head. Normally, he sells 3 boars each year to neighboring hog raisers and buys 3 replacements.

He has some sows which have farrowed their 5th litters. His two main criteria for screening sows are based on how well they suckle and the number of pigs weaned. And up-to-date records reveal that his sows have a high standard to meet. Average figures for the first 81 sows to farrow last year showed 10 pigs farrowed and 9 pigs weaned.

About 30 days before farrowing, sows receive an injection designed to build up antibodies in their milk. Sows are held in a well-shaded lot near the farrowing houses.

Their ration consists of one-third oats, corn, and alfalfa meal with 2 pounds of a vitamin feed supplement added to each 100 pounds. This vitamin feed contains A, D_2, D_3, and B_{12}, along with dicalcium phosphate and other ingredients. Each sow receives 3 pounds twice daily. To reduce feed cost, McCutchan makes fullest use of alfalfa-Ladino clover pasture for both breeding stock and fattening hogs.

Between farrowings, he thoroughly cleans farrowing crates, stalls, feeding pens, drinking and feed equipment, and houses with a high-pressure spray system mounted on his tractor. He uses a disinfectant containing the active ingredients of 50 percent cresylic acid and 23 percent soap.

Jim's multiple-farrowing system works:

Farrowing house

This insulated, heated house contains 8 farrowing crates. Here sows are confined to crates for 2 or 3 days before farrowing. When pigs are 3 days old, the sow and her litter are returned to their stall in the growing house

Growing house—1—2

Here pigs suckle for 3 to 3½ weeks and develop an appetite for prestarter feed. When sows are moved out, alternate partitions are removed, combining two pens. At 7 weeks of age, the pigs are moved to feeder pens

Feeding platforms

Each of McCutchan's 3 sheds and pens accommodates 100 to 125 pigs and contains 4 feeders and 2 automatic waterers. When the pigs reach 75-pound weights, they are shifted to the other hoghouses for fattening

Growing house—3—4

While pigs are being weaned in growing houses 1 and 2, their dams are being conditioned for rebreeding. At the same time, more sows are being penned in these growing houses and readied for the farrowing crates

Feeding platforms

By having 3 feeding pens on a concrete platform, Jim has a chance to thoroughly clean these areas when a 100-125 group of pigs is moved out to other houses for finishing. This measure is a safeguard against infections

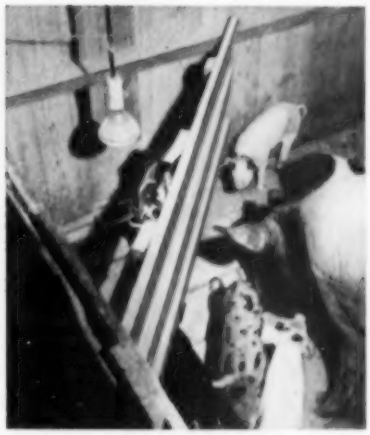
Turn to page 112 for building details

Here are the key features of McCutchan's low-cost, workable system

Photographs: Joe Munroe

Sows farrow in these crates during chilly or cold weather. He credits these crates for maintaining high litter average—only 5 pigs mashed out of 1,400 head.

When sow finishes farrowing, box is moved from rear to side of crate to permit the pigs to suckle. When pigs are 2 to 3 days old, sow and pigs are returned to the growing house.



While pigs suckle sow for 3 to 3½ weeks, heat lamp in corner of stall encourages them to use pig creep and eat 24 percent crude protein prestarter feed.

By the time they weigh 20 pounds, they will have consumed 3 to 5 pounds of this highly fortified dry feed. Feeder in corner allows about 2 inches of eating space per pig.

When pigs are weaned, sows are moved out, alternate partitions are removed, and pigs are bunched and sorted according to size.

To help smaller pigs catch up, they are put in smaller pens (floor plans of McCutchan's buildings on page 112). Here pigs get a highly fortified 22-percent ration which is shifted later to 16-percent complete developer feed.

Three sheds are lined up end to end on a concrete platform to provide three separate feeding pens for the pigs during 50- to 75-pound growing period. Here, the protein content of the pigs' ration is lowered to 14 percent

Portable hoghouses and converted horse barns provide shelter for fattening hogs. To keep labor requirements to a minimum, corncribs are used as self-feeders and he feeds protein in feeders

New furniture features good design

What is good design? Furniture that is well designed has basic, simple lines, is serviceable as well as stylish, looks at home in any surrounding, and isn't a passing fad

By Polly Meads

With the hundreds of different styles of furniture on the market it is often hard to recognize good design. However, your task of selecting furniture will be an easier one with more pleasing results, if you remember the following points:

Style. Whether your choice is Provincial, Contemporary, or Traditional, look for pieces that blend well with what you already have. Woods don't have to be identical but should blend. A mixture of styles and woods will make a room more interesting and give it a warm, lived-in feeling.

Scale and proportion. You can buy almost any size piece of furniture, but be sure it fits your own home and room. Avoid oversize sofas with large arms unless your room is quite large. Instead, consider one that seats as many persons, but has small-scaled arms, tapered legs, and a feeling of good proportion.

Finishes. It is hard to tell woods today with the many finishes that are used. Mahogany comes in almost any shade from light to dark. Walnut is the same way. The important factor is to select a wood and finish that you won't tire of, that shows a minimum of dust, and that blends well with furniture you have.

Workmanship. Good workmanship is essential to well-designed furniture. Check drawers to see if they pull easily. Try the hardware to be sure it is secure.

Upholstery fabrics. Your choice of upholstery fabrics will depend on your family and your way of living. Naturally you want serviceability, but you also want beauty. Today's fabrics are longer wearing, easier to keep clean, and are available in a wider range of decorative colors. Fabrics range from leather-like plastics to nylons, blends, leather, and wool.

Hardware. Here again look for simplicity. Usually the simplest in design will be the easiest to live with for a long period. Check to be sure the hardware won't tarnish.

On these pages you'll find highlights of what is being shown in stores around the country.

More new furniture, page 140

Successful Farming's

HOME DECORATING PLAN FOR 1957 **2**

RIGHT. *Here you find two kinds of wood and three different finishes. The serving cart is cherry, the dining table and chair walnut. The dining chair has an antiqued finish and the table a natural finish.*

Cart can be used with leaves opened out or folded back together.

FAR RIGHT. *A long, narrow harvest table with drop leaves and a 6-foot settee will answer your needs for plenty of extra dining space. With both leaves opened out you can seat 10 or 11 persons comfortably.*

With the leaves dropped the table takes up very little room.

RIGHT. *Occasional pieces of furniture may answer many of the needs of modern-day living. This tall narrow storage cabinet can be placed against a jutting wall. It takes advantage of a small area otherwise wasted and gives you more storage space. The small pull-up table is ideal for serving a snack in the living room.*

When not being used for serving, two or three of them can be lined up against a wall as a long table.

FAR RIGHT. *This curved sectional has an unlimited number of uses in any size room. Use it as one unit or break it up into two units.*

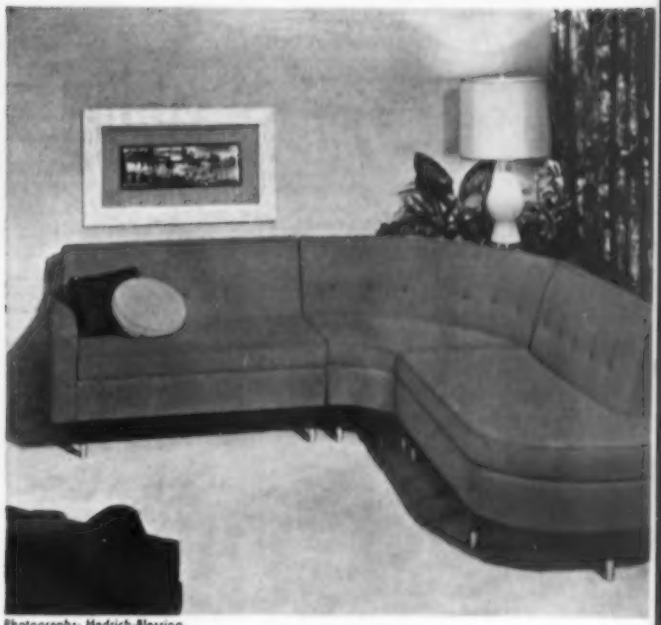
The small-scale arm, tapered legs, and graceful simplicity of the lines keep it from looking large, yet this sectional gives you lots of seating space.

RIGHT. *When buying bedroom furniture keep the scale light, the over-all design and the hardware simple. Make sure the drawers slide easily and give adequate storage space.*

The finish you choose is a personal matter. The bedroom furniture shown here is a good example of above points.

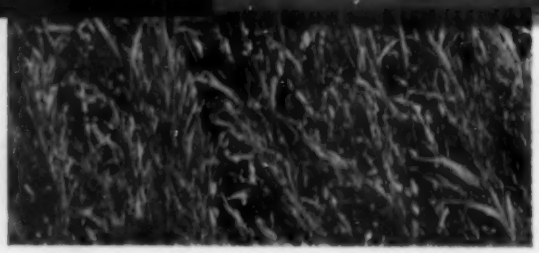
FAR RIGHT. *The idea of using a single headboard for twin beds is not news, but the design of this particular headboard is news. Simple, clean-cut lines give the headboard distinct styling; brushed brass trim is a perfect decorative touch.*

A light-scaled headboard offsets the heaviness of the beds and chests.



Photographs: Hedrich-Blessing

High-quality forage, harvested at the right time, can furnish most of the digestible protein required by a big cow producing up to 60 pounds per day



All-grass mixture—brome, timothy, quack, and other grasses—give you the poorest-quality forage, all other

Low-legume mixture, consisting largely of brome and quack, fall somewhere between an all-grass and

High-legume mixture, cut at proper time and handled right, will give you the highest-quality forage. For a stand to

Quality forage . . .

WHAT IT IS

WHEN TO GET IT

HOW TO KEEP IT

Improved forage production and harvesting methods can add at least 25 percent to the forage-carrying capacity of an average farm, resulting in a saving of $15 to $25 in protein and grain fed per cow

By Ray Hoglund, Michigan State University
and Vernon Schneider

You can't always judge forage quality by appearance alone. Other factors—ones you can't see—are important, too.

To find out which factors really contribute to forage quality, a study was set up at Michigan State University. It was conducted by a forage-quality committee represented by several departments. *Results of this study appear on this and the following 3 pages.

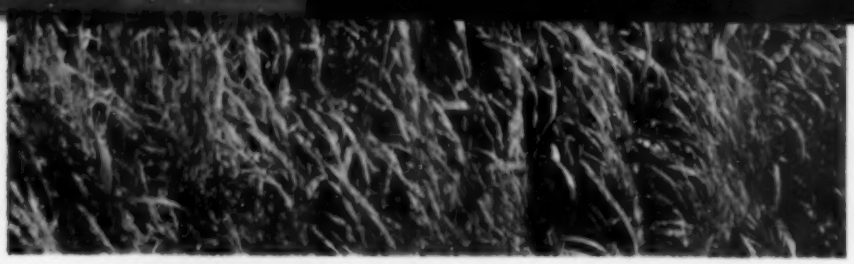
Twenty-three southern Michigan dairy farmers were selected to cooperate in the study. John Davis, whose pictures appear in this article, was one of these dairymen. Ninety-three fields, totaling over 900 acres, were observed. In all, 50 hay samples were collected and judged.

They were fairly consistent in evaluating the medium-quality samples, but tended to undervalue the high-protein hays. Low-protein hays were generally overrated.

Color is often a poor guide to feeding value. Alfalfa hay harvested in the early-bloom stage, but rain-damaged, usually has a higher feeding value than green hay from the same field harvested in the full-bloom stage without rain damage (see samples on page 62 and 63).

The feeding value of a forage is largely determined by (1) the composition of the stand, (2) the date of harvest, and (3) the harvesting and storage methods used. These factors—and their influence on quality—are discussed in detail in the three sections of this article.

*Members were S. T. Dexter, L. V. Nelson, and K. T. Payne of Farm Crops; C. F. Huffman of Dairy; E. J. Benne of Agricultural Chemistry; R. H. Nelson of Animal Husbandry; and C. R. Hoglund of Agricultural Economics.



things being equal. They usually mature earlier than legumes and, therefore, soon become woody and low in protein. Late-harvested, grassy forages often test as low as 6 to 8 percent protein

high-legume. Stand with less than 35 percent legumes is considered poor and should be reseeded. Age of stand influences feeding value. Stands 4 or more years old are usually low in legumes

be rated excellent, it must have 65 percent legume and be relatively free of weeds. In this study, almost 60 percent of stands that were seeded one year and harvested the next rated excellent

WHAT IT IS

Getting the right kind of forage in the stand is extremely important in improving forage quality. A stand high in legume usually makes better-quality forage than one high in grass. Brome, timothy, quack, and other grasses usually mature more rapidly than legumes, and therefore become woody and low in protein early.

A ton of alfalfa hay harvested at the same date as a ton of bromegrass contains almost twice as much digestible protein. The chart below shows you the average difference in the crude protein per acre.

CRUDE PROTEIN PER ACRE	POUNDS
High-legume	1,600
Low-legume	1,120
High-grass	895

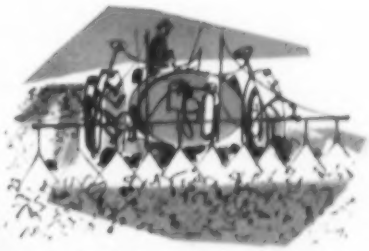
Better management practices is a major reason why some farmers produce better stands of forage than others. A study of dairy management practices on 172 south-central Michigan farms shows that the 20 farmers who had the best alfalfa-brome stands used considerably more fertilizer, both at seeding time and later as top-dressing (see drawings below). Also, a higher percentage of these farmers were testing their soil.

For when to get quality forage and how to keep it, turn to next page

Steps in establishing and maintaining a good legume stand

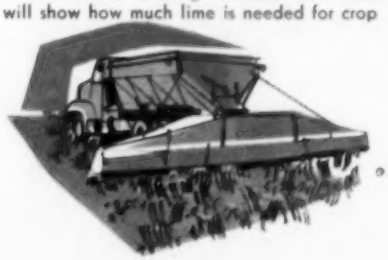
Well-drained soil is first step in establishing productive alfalfa stands. Drainage investment pays big dividends in areas where alfalfa-grass stands outyield other legume or grass mixtures. Tiling is the best for low spots

Plant certified seed of variety recommended for your area—it's good insurance. Fertilizer, especially phosphorus, is important in getting seeding off to good start. Band seed



Insect control helps maintain good stand, increases yield. Avoid overgrazing the seedlings and grazing during September. Replace the stands whenever they become too grassy

Many alfalfa failures are caused by acid condition of soil. Apply enough lime to correct this condition, preferably at least 6 months before seeding is made. Soil tests will show how much lime is needed for crop



Control plant competition by early grazing or harvesting crop for green-chop, silage, or hay. Using small grains as companion crop, particularly highly fertilized wheat, often results in poor legume stands. Remove straw

Top-dressing helps hold legume in stand, ups yield. Potassium is important in giving alfalfa long life. Boron is lacking on some farms. Soil tests show best combination of nutrients

WHEN TO GET IT

No single practice influences quality as much as date of harvest. For top-quality feed, legume-grass forages should be cut in the early-bloom stage. In southern Michigan and other northern Cornbelt states, this is usually by June 20. This date varies from year to year, depending on the season. For Ohio, Indiana, and other central and southern Cornbelt states, this optimum harvesting date comes 1 or 2 weeks earlier (June 6 to 13).

A delay of 3 to 4 weeks in harvest date reduces the protein content of high-legume hay by 35 percent and the high-grass hay by 50 percent.

High-legume stands harvested by June 20 (in Michigan) under average climatic conditions usually test from 18 to 22 percent protein (see chart below). A high-grass stand harvested by this same date tests from 12 to 16 percent protein.

This chart shows the range and average crude protein of high-legume and high-grass hay harvested early and late:

PERCENT CRUDE PROTEIN	RANGE	AVERAGE
High-legume hay		
Early harvest	18-22	20
Late harvest	12-15	13
High-grass hay		
Early harvest	12-16	14
Late harvest	6-8	7

Protein adjusted to dry-matter basis

High-grass stands not only lose protein at a more rapid rate, but they also take on more fiber. As fiber content increases, cows eat less and less hay. This results in loss of milk production unless more grain and protein supplement are added. This adds to the cost of production.

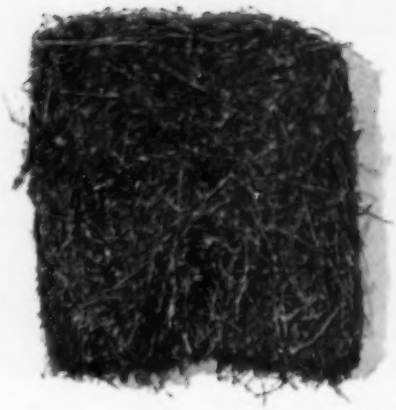
EARLY

High-legume

Forage samples from John Davis farm show what can happen to protein content of the same hay when harvested early and late—with and without rain.

A stand of excellent alfalfa-brome was mowed on June 12, baled, and put in the barn on June 14 without weather damage. It tested 20 percent protein and yielded about 1,440 pounds crude protein per acre. Baling of part of this hay was delayed until June 19 due to two rains totaling 1.9 inches. One-fourth of the protein was lost.

Delaying harvest until July 14 cut the total crude protein yield per acre to 990 pounds. When this hay was rained on 5 times, it lost an additional 275 pounds.



Pounds protein per acre: 1,440 (no rain)

High-grass

Another field of 100-percent bromegrass was also harvested at the same early date (June 12) as the high-legume hay. It yielded about 775 pounds of crude protein per acre. This is based on a total yield 80 percent as high as the high-legume field and no rain damage. Rain-damaged hay yielded 580 pounds.

The bromegrass harvested July 14 tested only 7.2 percent protein, yielded about 430 pounds crude protein per acre. The rain-damaged, late-harvested bromegrass had lost 60 percent of its protein.

Davis harvests no hay at this late date. These samples were intentionally left in the field. By starting early, he takes advantage of every weather break.

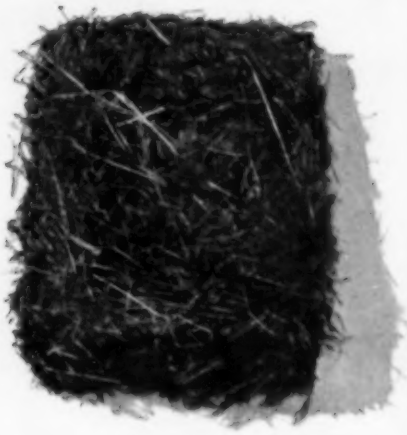
Pounds protein per acre: 775 (no rain)

Hay crushers find their greatest usefulness on farms where hay is baled. Barn-drying has slight advantage over crushing for improving quality

Photographs: Hopkins; Suter, Hedrich-Blessing

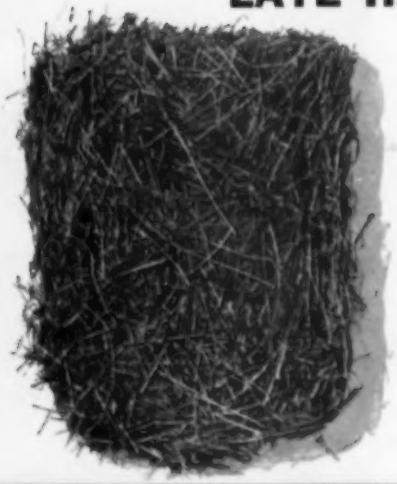
HARVEST

1,040 (rain damage)



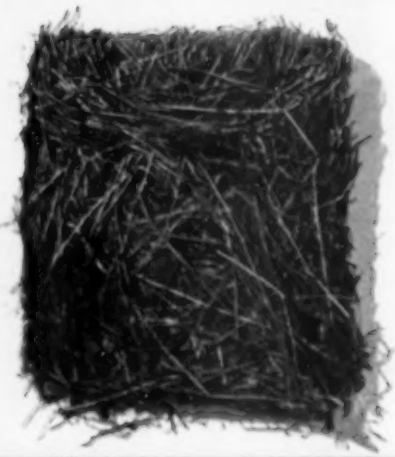
580 (rain damage)

LATE HARVEST



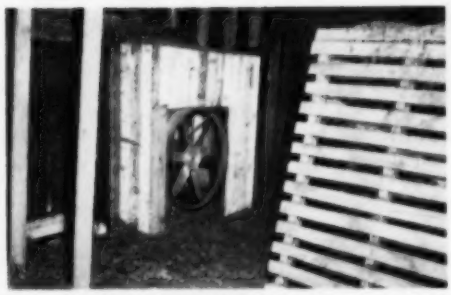
990 (no rain)

715 (rain damage)



430 (no rain)

310 (rain damage)



Barn-drying and field-chopping go hand in hand, making it one of best ways to keep quality. The field-curing time is cut in half

Two out of 3 times, you can expect to make grass silage without rain on same day it is cut

HOW TO KEEP IT

It is all very well to encourage early harvesting of forage crops, but you still have to contend with weather hazards. You can't eliminate these hazards, but you *can* improve your chances with the right harvesting and storage methods.

Just what are your chances of having at least 3 consecutive days of no rainfall in mid-June? This is the minimum time required to field-cure hay at this date.

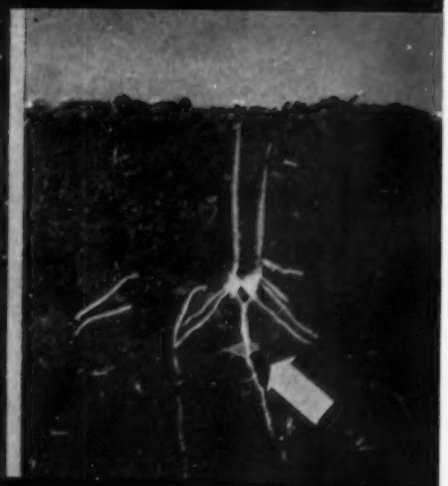
A study of weather data from the United States Weather Station at East Lansing, Michigan, for a 45-year period shows a 28-percent chance of 3 continuous days of no rainfall for the period June 15 to 30. This means that for any day during this period that you mow hay, the odds are almost 4 to 1 against your getting good haying weather for 3 consecutive days. Some of the days with no rain are cloudy, making the odds against good drying weather even greater.

The probability of 3 successive days of good haying weather are almost twice as good if you wait until mid-July. But quality is greatly reduced when forages become more mature. So any way you look at it, the odds are against the harvesting of high-quality forage when the field-curing method is used.

The gamble in haymaking can best be reduced by shortening the field-curing time. The chart below gives the hours of sunshine needed to cure hay or silage using different methods:

TIME REQUIRED IN FIELD	HOURS
Field-cured hay	20-25
Crushed and field-cured	12-15
Chopped and barn-dried	10-12
Wilted, chopped silage	2-5

As you can see, your chances of harvesting high-quality forage are greatly improved when hay is crushed or barn-dried. These methods cut at least one day off field-curing time and reduce the probability of rain damage. Both methods add about $2 to the harvesting costs per ton.

This type equipment . . .	puts fertilizer here . . .	with these results . . .
Early split boot		
Modern split boot		
Below seed bander		
Adjustable single boot		

Where do you put starter fertilizer?

By A. J. Ohlrogge
Purdue University

Where you put fertilizer in the row for corn makes the difference between a full stand, half a stand, or no stand at all. Ten years ago placement was not a big problem. We used around 125 pounds of 2-12-6 and applied it at slow planting speeds. The fertilizer was kept apart from the seed; even if it was close to the seed it wasn't strong enough to do much harm.

Today, more than 200 pounds of 4-16-16 is commonly used for corn. Planting speeds reach 5 to 6 miles an hour and tend to put the fertilizer with or very close to the seed. But by and large, we are using the same equipment—and it's just *not* doing the job.

The split-boot attachment in perfect adjustment and used at slow planting speeds places two bands of fertilizer above and on either side of the seed. As the picture at the top of the opposite page indicates, however, this fertilizer is above the roots. There must be a movement of the fertilizer down in the soil or the roots must grow up to get the fertilizer. But roots grow down! Since phosphate and potash move very little in the soil, the plant can't really use this fertilizer until the secondary roots are formed higher on the plant. By that time the fertilizer may be in dry soil. Plants can't get much nourishment from dry soil.

Worn split-boot attachments, poorly adjusted and operated at today's planting speeds, are actually putting much of the fertilizer with the seed. Granulated fertilizers and high speeds result in the plant food flowing out the back of the boot in a solid band. Most of the time it ends up with the seed. Uneven stands and replanting are the result. It may also form a solid band over the top of the seed. A light rain will move the soluble salts down around the seed, killing germination in the same way as fertilizer with the seed.

You may get fertilizer placed directly below the seed with poor adjustment of a single-boot attachment on your planter. In addition, there are at least two attachments designed specifically to put fertilizer below the seed. Pictures at the left vividly demonstrate the disastrous results of this method. The little primary root which must supply water to the new plant is surrounded with soluble salts which hold the water and keep it from the plant.

The single-boot attachment properly adjusted offers the best answer to the problem today. You will put the fertilizer *to the side and below* the seed. Fertilizer is placed in the path of part of the growing root system. This is important, because roots will not grow out of their way to find fertilizer. After reaching the fertilizer band, roots must grow and branch out into it.

Corn at left was all planted the same day; final pictures taken 9 days later. All received 200 pounds per acre of 4-16-16, with inert clay added to increase volume for picture purposes.

Fertilizer above the seed is out of reach for early plant growth. Roots will grow down, not up. Phosphate and potash will move very little.

Fertilizer actually will not be used until the corn plant develops a secondary root system. By that time, the soil may be dried out around it; plants can't get much nourishment from fertilizer in dry soil. Plant gets off to a slow start.

Fertilizer with the seed kills germination. The soluble salts in it draw and hold soil moisture. Note the dark, moist band. This water cannot soak into the seed to start germination processes.

Compare seed at the left with seeds above and below it. All were planted same day, and the pictures in last column were all taken 9 days later.

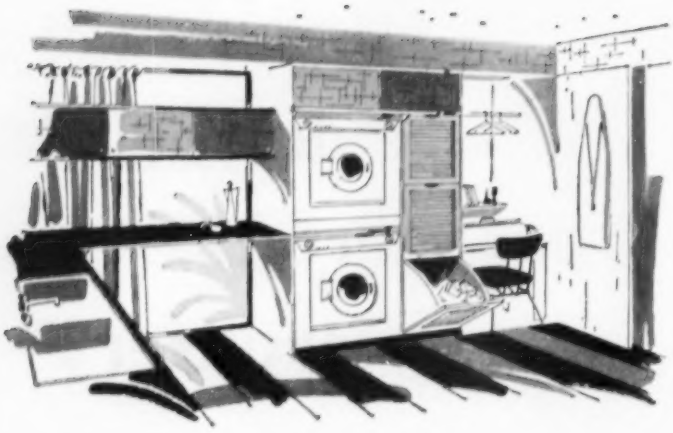
Fertilizer below seed slows germination and early growth. Each germinating seed sends out a tiny primary root. Normally, this root supplies the water for early growth. However, in this method, the root grows into the fertilizer band.

Again, soluble fertilizer salts which surround the root draw and hold the available moisture present in the soil. The supply of water to the plant is restricted, and early growth is slow.

BEST RESULTS with fertilizer placed below the seed and to one side. Seed germinates quickly. Plant uses food inside the seed and tiny primary root brings in water from the soil.

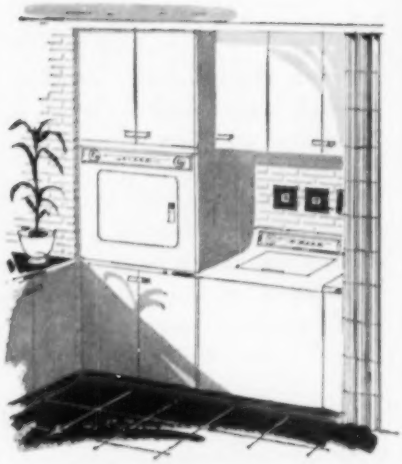
Side roots develop and grow out and down into the fertilizer. Plant has food available when it is ready to grow. The fertilizer really is a "starter."

Photographs: Kraus. Drawings: Whitaker-Geersoy



Here's a kitchen-laundry center that's pretty and convenient. It meets requirements listed below, and is fully equipped.

Dryer with front control is stacked on top of washer with front opening and controls. Dry clothes are folded on counter at left. Soiled clothes, sorted as they accumulate, go into washer from bins at right. Ironing equipment—ironer, hand iron, ironing board, rod—is kept in closet at right of bins. Detergents, soap, bleaches are in cabinet above washer.



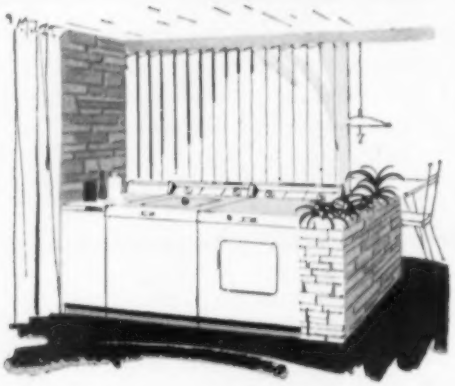
This installation ranks high in convenience. To open at same level as washer, dryer is stacked on sturdily built clothes hampers. For plenty of soiled clothes storage, 2 more hampers are added at right of washer. Make installation attractive enough for dining area by hiding it behind fold-away doors

Laundry center for the kitchen

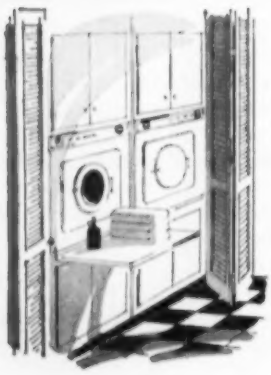
By Ruth Bos Krustev

Including the laundry in the kitchen is one of the newest "center" ideas. And, the idea is practical if:

- **Plumbing, vent connections omit long, costly pipe runs**
- **Light, air, water, utilities are properly supplied**
- **Space is available for storage and laundry equipment**
- **Laundry center looks nice in the kitchen**

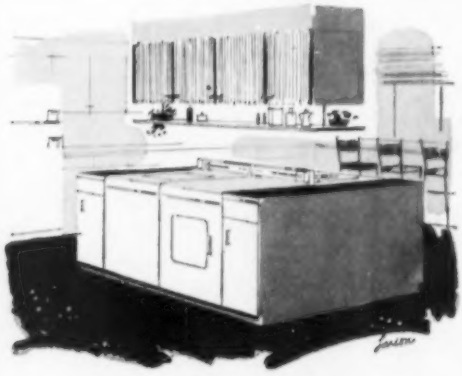


Top-opening washers have easy installation possibilities in kitchen-laundry centers. Divider wall and planter give them a welcome, dressed-up look. Don't forget—the washer must have plenty of hot water for best results. The dryer needs an outside vent or a drain for condensation. Your dealer will help you follow manufacturer's directions



Front-opening washer and dryer can both be installed at waist height. Washer bins are below, supplies above. Pull-out boards are for folding clothes. Louvered doors hide all

Front-opening washer and accompanying dryer take to undercounter location, too. Much like a dishwasher. Available in color or spray paint to match the kitchen cabinets



Top-opening washer and matching dryer share a peninsula with a clean-up center in this kitchen laundry. Sink and dishwasher are directly behind. Common plumbing is shared by both. And, hot water is available on tap. Narrow base cabinets cut view of laundry from dining center

ROOM DIVIDERS

that serve 4 purposes

A room divider can work 4 ways in a home. It can make a room appear larger, provide storage space, define living areas, and give you extra wall space for arranging furniture

Provide storage space. Mrs. Don Spomer, North Bend, Nebraska, needed a place to store table linens, odd-size serving bowls, and extra trays. So they built in shelves that extend through the divider and into the corner kitchen cabinet. Sliding shelves make it easy to keep things straight, and items frequently used in the dining room are easy to find without a lot of hunting and searching, bending, and stooping.

This room divider gives the effect of a solid wall without giving the dining area a closed-in feeling.

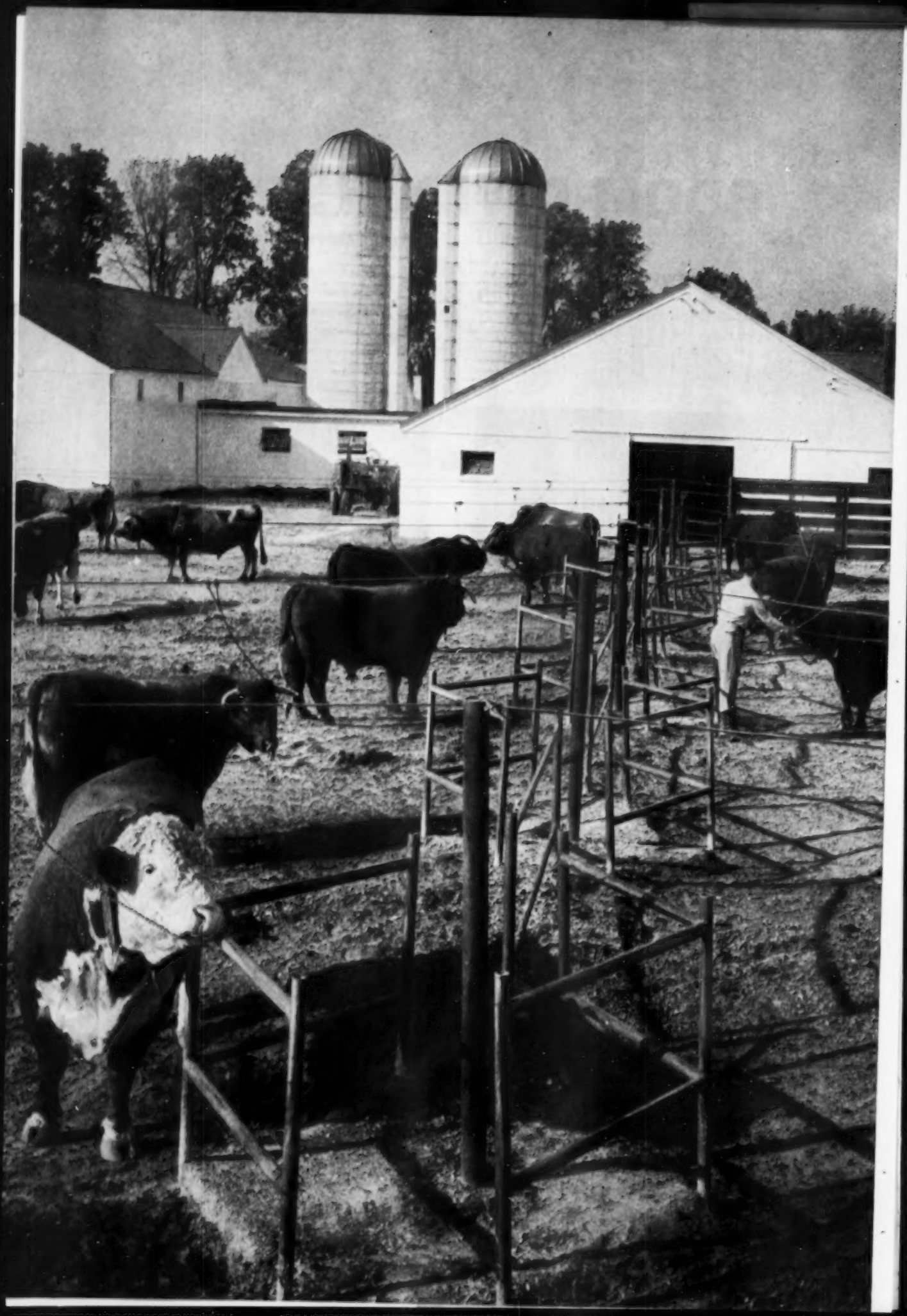
Provide extra wall space. Need extra wall space for a desk in the kitchen? A divider may be the answer. The Spomers extended a room divider out just the length of the desk and made a compact business center. This divider, the one on the left, and the one in the right background outline the boundaries of the dining area. By using two low dividers the Spomers kept an open feeling

Define living areas. A room divider separates a long room and creates a dining area on one side and a reading corner on the other side. The divider is high enough to maintain privacy between the living room and the dining area, yet low enough to keep the open, spacious feeling which the Spomers wanted

Photographs: Warren Reynolds

Make room seem larger. This room divider forms an entrance hall which appears to add extra feet to the floor plan. At the same time the divider provides storage space for card table, chairs, television trays.

Strips of wood paneling set at an angle carry the lines of the divider on up, making it a complete unit instead of an isolated arm protruding into the room. Panels add privacy without closing in entrance hall



Good beef bulls are getting around

Beef bull semen is available in 75-80 percent of the areas where an artificial insemination program is in operation. The Northern Ohio Breeding Association, Tiffin, Ohio, has 20 beef bulls representing three major breeds in its stud

A NEW SERVICE is becoming available to the cattle industry. And in general the use of beef bull semen falls into the four categories shown here.

Farmers, F.F.A. members, and 4-H'ers who are establishing a foundation beef herd; the larger beef cattle operators who use their own sires and those of breeding organizations; those with special breeding management problems such as an injured sire; and dairymen who breed their lowest-producing cows.

By Mike Bay

Half to three-fourths of the nation's 85 artificial breeding organizations now have one or more beef bulls in their studs.

And many of the small associations which do not have a heavy demand for beef semen are purchasing it from other studs.

Altogether, Dr. H. A. Herman, executive secretary of the National Association of Artificial Breeders, estimates that beef bull semen is available in at least 75 to 80 percent of the areas where an artificial insemination program is operating.

Here's how cattlemen are using beef bull semen in their breeding program. In the beef cattle industry, artificial breeding continues to gain acceptance as a practical breeding technique.

Artificial insemination of beef cattle is meeting the needs of the operator with only a few cows or heifers. Many 4-H'ers, F.F.A. members, and farmers trying to build up a foundation herd are relying on association-owned bulls. They have access to breeding they couldn't afford to own with their limited operation.

Also, by using other bulls at the local stud or by using beef semen from another association, the breeding of related animals becomes a simple problem.

Many reputable beef cattlemen hesitate to help the small producer because of the danger of spreading disease by natural service through the use of their sires.

Small-herd owners and F.F.A. members Francis and Keith Tschanen (right), Sycamore, Ohio, discuss sire selection with Luther Howell, beef representative, Northern Ohio Breeding Association, Tiffin, Ohio

In fact, a 60- to 80-percent calf crop resulting from trichomoniasis and vibriosis spread by natural service has caused more and more breeders to obtain clean bulls and to shift to artificial insemination. By using fresh semen they have been able to reduce the spread of diseases.

The purebred breeders are spreading the influence of their best bulls through artificial insemination. As compared to natural service of 30 to 100 calves to the sire, artificial insemination may increase this number from several hundred to several thousand. The average get of sire in dairy cattle breeding using artificial breeding is about 2,000.

Now that performance-testing programs are measuring the rate of gain, efficiency of feed utilization, and conformation of progeny, the use of artificial insemination gains increasing significance. Recognizing the economic importance of this testing program, beef cattlemen are anxious to breed as many cows as possible to bulls proved superior.

Artificial insemination also solves the problem of continuing the service of an injured bull. Technicians of the local association or local veterinarian can collect his semen. This prevents a bull replacement problem and an interruption of the breeding program.

This same approach is effective during the show season where the most valuable bulls in a herd must be competing for top honors in the show ring for several days. By establishing a frozen semen bank on the show animals, planned matings may continue as scheduled and according to plan.

Aside from the beef bulls in association studs, these organizations are spreading the influence of good beef bulls in another way. Several breeding organizations are cooperating with beef herd owners by freezing bull semen and storing it on a custom basis. A technician from the

[*Turn to page 184*

Photographs: Joe Munroe

A special breeding problem is solved at the Cambrian Farm, Urbana, Ohio, by collecting and freezing semen from sires exhibited at shows. The breeding program continues uninterrupted during this period

How to CUT machinery COSTS

Now's a good time to analyze what you're spending to keep your machinery going. Is it paying for itself, or is it breaking down too much, or standing idle 90 percent of the year? Here are some hints and ideas to reduce your costs if they're too high. Start figuring out a system now

By S. S. DeForest

Cut operating costs

Drawings: Whitaker-Guernsey

Keep machinery in top-notch adjustment and lubricated so minimum power is needed for operation. Have cutting edges sharp, plow and cultivators aligned, moving parts working smoothly, timing and metering mechanisms in good condition.

Have your tractor tuned for most efficient operation. Use the correct thermostat, adjust the carburetor, have the ignition system in good condition.

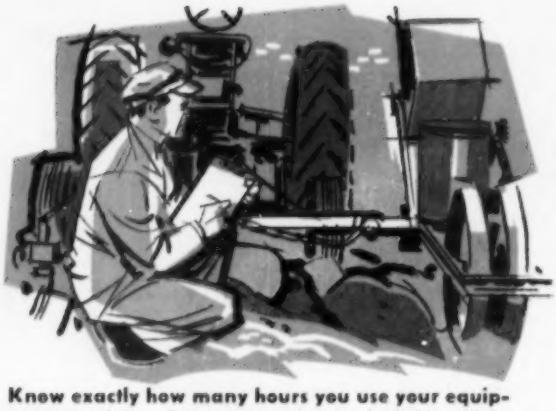
Practice contour cropping on sloping land to save fuel. Up- and downhill operations take more.

Plow no deeper than necessary to make a suitable seedbed and prevent stirring and restirring your soil.

Reduce unnecessary field travel. Drive around the field or use long-row pattern to reduce end travel.

Use reasonable rates of field travel to reduce machinery breakdowns and do a better job.

Keep records on operation



Know exactly how many hours you use your equipment—and for what purpose. A record of this will be positive proof whether you can make enough use of a tractor or combine. These days, machinery has to earn its keep. Records will show you whether to keep it or find ways to use it more often.

Records will show you, too, which machines have too many breakdowns, take too many expensive parts, take too much time to repair because they're hard to work on, and provide additional evidence that they're too expensive to own.

Have a clipboard handy—mount it on the tractor—to record oil changes and other lubrication information. Include a sheet for the implement, too.

Make notes at the time you're using a machine if parts will need adjustment, replacement next time you use the implement. You won't need to rely on your memory if you've made a record of these things.

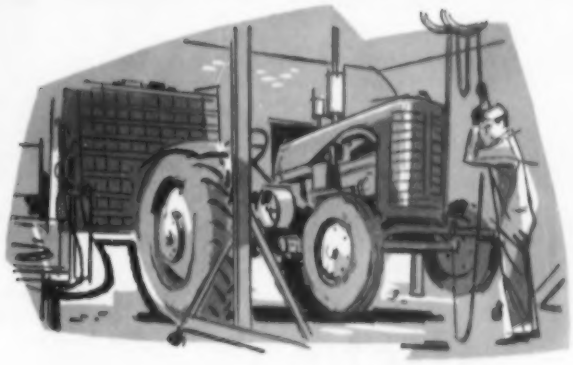
Make overhauls in slack seasons

Make a systematic inspection in slack seasons of every machine you have. Make necessary overhauls at that time so when you next need the equipment, you'll have every confidence that it will give minimum trouble. Busy seasons are no time to begin making major repairs.

Continue record keeping as you do or have done major repairing. Know how many parts you replace, how much they cost, and the labor required for reconditioning.

Slack season is the best time to hire someone to do your major overhauling, if you don't do it yourself. It's his slack season too, probably, and you can bargain for a better price at this off-season time. When he's not rushed, your chances of a better job are good, too.

Do your own minor repairs



Content yourself with minor adjustments and replacement of smaller parts of your machinery if you're better with livestock or other phases of farming than mechanical repairing. It's better for you to hire someone who can do bigger mechanical jobs. Chances are he can do them faster, more satisfactorily because he does them more often. If your shop is well equipped, on the other hand, and you have the mechanical ability, major repairs and overhauling are in the range of possibility—and you'll save money.

For emergency machinery repairs, have a welder and portable electric tools handy. When it's important to get the crop in storage, a breakdown is costly. You may pay for such equipment in an emergency.

Keep machines working

Find more uses for your equipment, or parts of it, to keep them working as much as possible. For example, switch the power unit from baler, to combine, to chopper. Use a combine for harvesting corn as well as for small grain. Use your chopper for making cornstalk mulch or bedding as well as for silage and chopped hay.

Join with your neighbor in ownership of larger, specialized machines. Set up a partnership or corporate-ownership system to keep the machines working more.

Trade machine work with a neighbor. You harvest his grain with your machine, for instance; he puts up your hay.

If you can't justify owning the machine on the basis of work you have for it on your own farm, hire the work done by a custom operator. Or, perhaps you already have the machine and can work in a few days doing custom work. Do this to make the unit work more days a year. Keeping it working is the only way to offset fixed costs.

Cut trips over the field

Use all your tractor's power and save trips over the field by combining field operations wherever possible. Hitch another tool on behind or use wider equipment to cover more ground.

Consider revamping your cropping practices so you eliminate trips over the field. Try the plow-plant or wheel-track methods of planting corn. Once-over tillage or mulch-planting systems may apply. Preemergence spray will save trips over the field.

Consider used machinery

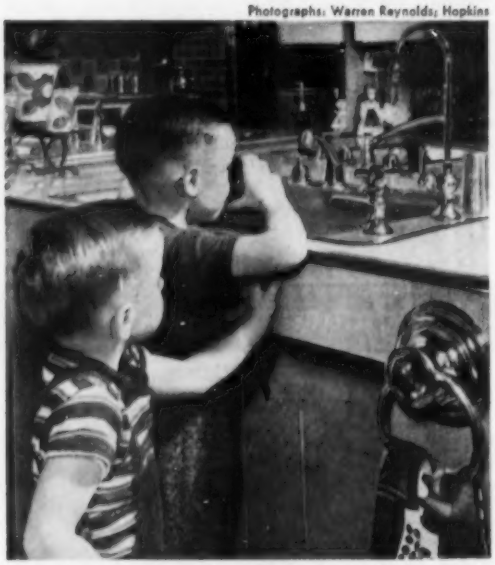
If you need more equipment, there are plenty of usable hours in used ones. Except for gadgets, streamlining and refinements in new ones, you can get the same work from old ones—and they cost less. But, before buying *any*—new or used—nail down the exact use you can make of it. Can it pay its own way?

Breakfast bar idea inspired this play area for the children of Baxter Freese, Wellman, Iowa. This counter faces a "U" kitchen where Mother is near enough to keep an eye on the children. Mrs. Freese says this keeps them away from busy part of kitchen. Three drawers on right side of counter hold toys

Kitchens designed with children in mind

Children in the kitchen can get under foot when you're rushed with work. Here are ideas farm homemakers are using to help solve the problem

Photographs: Warren Reynolds; Hopkins



Extra faucet at front edge of sink is handy for those extra drinks of water. David and Paul, sons of Mr. and Mrs. Maurice Brenner, Mapleton, Iowa, get their own drinks easily. Faucet turns off automatically. Unbreakable glass is used

Mix center converts to easel or desk on a minute's notice. But first Melinda, daughter of Mr. and Mrs. Gene Fowler, Lexington, Nebraska, will bake a cake like Mother's. This pull-out board can be added to an existing base cabinet

Medicine cabinet in kitchen is stocked with daytime health and first-aid needs. The cabinet is high enough above the floor to be out of reach of small children. The shallow shelves on the cabinet door have no-spill guards

How to butter up a soup—and a husband!

Anyone can do this. Just plop a pat of butter in the middle of your soup. That, if you'll forgive us, is simply soup-er! Hot Buttered Soup.

Butter up a soup like Campbell's Tomato—a soup that begins with pedigreed tomatoes that grow in the summer sun until they're red, red ripe, and are a good source of Vitamin A. Wish you could see how round and firm they are. Wish you could taste that fresh-picked flavor.

Come to think of it, you can—that's just what we have for you in America's favorite soup. As we were saying . . . why not butter up a soup . . . and a husband tonight!

SOUPS SUPPLY BASIC NUTRITIONAL NEEDS: Vitamins, Minerals and Liquids—for general well-being • Proteins—for upkeep and growth • Carbohydrates—for energy

Once a day . . . every day . . . SOUP!

Look what you can do with

. . . only because of the

With just one cylinder you can

cook 410 meals for four . . .

New "Thermal Eye" Top Burner Cooks At Exact Heat You Set . . .

. . . makes an automatic utensil out of every pot and pan. No more scorching, burning, smoking, splattering. No messy boil-overs. Foods cook just right without watching, retain appetizing color, flavor, vitamins!

World's Most Modern Automatic Range the 1957 Skelgas Constellation

So many automatic work-saving features to make all your cooking and baking a joy! You'll love the new "Thermal Eye" automatic top burner . . . automatic lighting for all burners including oven . . . big bake oven that turns on and off automatically . . . and separate smokeless broiler with optional automatic rotisserie. Handy griddle converts to huge fifth burner for busy-time overloads. Make it yours—soon! Weekly payments from.....**$4.31**

Enjoy modern Skelgas cooking for as little as $99.95 with a Skelgas Starlight range:

SK-1467C

Deluxe 30" range with clock-controlled 24" oven that lights automatically. Thermal Eye top burner. Weekly payments as low as.....**$2.93**

SK-1427A

Deluxe 36" range with new Thermal Eye automatic top burner, 16" oven with automatic lighting. Weekly payments from.....**$2.75**

SK-1477A

Deluxe 20" range with big broiler, full 16" oven that lights automatically, Speed Meal top burner. Weekly payments as low as.....**$2.41**

SK-1487

24" range with thermostatically controlled 16" oven. Drip pans and hinged top for easy cleaning. Weekly payments as low as.....**$2.12**

Skelgas Appliances are available for Skelgas or natural gas

just one cylinder of *Skelgas*

purity, cleanliness, and full weight of Skelgas:

Plenty of hot water is no longer a luxury with a Skelgas Thrift-omatic, the water heater that gives you up to 50% more *usable* hot water for dishes, showers, baths, shaving, laundry, cleaning! A 30-gallon Skelgas Thrift-omatic replaces over 4 times more hot water per hour than most 50-gallon electric water heaters. Costs less to operate, too. Weekly payments from..... **$1.74**

Goodbye weather worries when you have a Skelgas Constellation Dryer! Dries even heaviest work clothes in minutes — yet safe for your wispiest nylons and rayons. Ask for free home trial. Weekly payments from..... **$3.46**

Matching Constellation Automatic Washer gets even collars and cuffs of white shirts snowy white without hand scrubbing. Weekly payments from..... **$3.05**

Here's why Skelgas doesn't use up so fast as cut-rate gas:

You're guaranteed full weight because your Skelgas dealer has benefit of our scientific measuring equipment. With Skelgas you get *all* the gas you paid for, and it *all burns!*

"Wet" gas is exposed and rejected by the Skelgas Cobalt-Bromide Test. Besides not burning, moisture causes exasperating freezeups. You're sure of *bone-dry gas* with Skelgas!

Undesirable gases can't sneak by the Skelgas Vapor Pressure Test. That means you're protected against ingredients that won't vaporize or burn. So there's *more heat* in Skelgas!

Skelgas Seal of Approval . . . the industry's most coveted certificate of merit.

Skelgas

. . . a product of Skelly Oil Co. P.O. Box 436, Kansas City, Mo.

The industry's most trusted name stands behind every cylinder and every appliance bearing the Skelgas label. And Skelgas brings you the best-trained servicemen in the business!

You can bake your Gingerbread from the private recipe of *Mary, George Washington's Mother*

At Kenmore, Betty Washington Lewis, sister of George Washington, supervised the baking of Gingerbread from her mother's private recipe.

Photographed in the kitchen of Kenmore, Fredericksburg, Virginia.

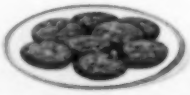
Bake Dromedary Gingerbread From the World's Most Treasured Recipe

Mary Washington made history when she created the original secret spice blend for old-time gingerbread. Think how proud she must have been when she served this favorite to her family and to such famous visitors as Lafayette, who paid her a high compliment on it.

Her famous gingerbread recipe was given to her daughter, Betty Washington Lewis. Down through the years it has grown in fame. Today, Mary Washington's private recipe is the world's most treasured recipe and it is used *exclusively* in Dromedary Gingerbread Mix!

Dromedary Gingerbread is extremely easy to make. All you add is water. It always turns out rich, moist, spicy. Serve it piping hot for dessert on cold evenings—plain, or with whipped cream, apple sauce, or ice cream.

You, too, can make history when you serve to your family and friends Dromedary, the *only* gingerbread mix inspired by the secret recipe of Mary Washington, mother of our first president. Get a package today.



Dromedary Gingerbread Mix makes wonderful cookies

•

Special Dromedary Treat

Cut gingerbread into squares. Then cut squares into equal layers. Place sliced bananas and whipped cream on lower layer. Replace upper layer and top with more bananas and whipped cream.

Dromedary received the rights to this recipe in return for its contributions to the Washington-Lewis Chapter, D.A.R., and the Kenmore Association, Inc.

Saucy Tuna Timbales (Makes 5 servings)

Combine 1½ cups milk, 3 beaten eggs, a 7-ounce can drained, flaked tuna, ¼ teaspoon salt, a dash of pepper, ¼ cup minced green pepper, and ½ cup cracker crumbs. Pour mixture into five 6-ounce custard cups. Place cups in pan containing 1-inch water; bake in slow oven (325°) 45 minutes. Serve with *Dill Pickle Sauce:* Make a cream sauce using 2 tablespoons butter, 2 tablespoons flour, and 1 cup milk. Stir in ⅔ cup chopped dill pickles, ¼ teaspoon salt, ¼ teaspoon pepper, and ¼ teaspoon Worcestershire sauce.—*Mrs. Herman W. Cramer, Wisconsin.*

Shrimp Potato Boats (Makes 4 servings)

Bake 2 large potatoes. Cook 2 tablespoons each of chopped celery, chopped green pepper, and chopped onion in 2 tablespoons butter till tender; mix 1 cup chopped cooked shrimp and 1 tablespoon lemon juice. Split hot baked potatoes in half lengthwise. Scoop out and mash potatoes; keep shells intact. Season with butter, salt, and pepper. Place mashed potatoes back in shell; pile in shrimp mixture. Sprinkle with paprika; dot with butter. Trim with whole shrimp. Reheat in oven.—*Mrs. George Miller, Ohio.*

Haddock with Onions (Makes 6 servings)

Place 2 pounds fresh or frozen large haddock or perch fillets in greased 6x10-inch baking dish. Salt and pepper to taste. Melt ¼ cup butter; mix in ½ cup finely crushed cracker crumbs. Cover fillets with butter-crumb mixture. Sprinkle with chopped parsley. Bake in moderate oven (350°) 20 minutes or till fish is tender. Serve with *Pickled Onions.* To pickle onions: Slice 4 medium onions; separate into rings. Cover with boiling water. Cool to room temperature. Mix together 1 cup vinegar, 1 cup water, ½ cup sugar; add salt and pepper to taste. Drain onions; add vinegar mixture; let stand 1 hour. Drain before serving—*Mrs. F. P. McClure, Missouri.*

Meat Ball Chop Suey
(Makes 4 servings)

- 1 cup boiling water
- ½ cup rice
- 1 beaten egg
- 1 pound ground beef
- ¾ teaspoon salt
- Dash pepper
- ¾ cup chopped onion
- 1½ cups diced celery
- 1 can condensed cream of celery soup
- 3 tablespoons soy sauce

Pour boiling water over rice in a 2-quart casserole and let stand while preparing remaining ingredients. Mix egg with ground beef, salt, pepper, and ¼ cup of the chopped onion. Form into 1½-inch balls. Brown in a small amount of hot fat. Add with remaining ingredients to rice. Cover and bake in moderate oven (350°) 75 minutes.—*Mrs. Emil Zellman, Minnesota.*

Cut out these recipe pages and file them in your favorite cook book

Rice main dishes

You'll enjoy using these recipes with rice. They're inexpensive and easy to prepare as well as tops in taste

Pork Chop Casserole (Makes 6 servings)

- ¾ cup rice
- 6 pork chops cut ½ inch thick
- 1 large onion, sliced
- 1 medium green pepper, cut in rings
- 1 1-pound can (2 cups) tomatoes
- ¼ teaspoon thyme
- ¼ teaspoon marjoram
- 1 teaspoon salt
- Dash pepper
- 1 can beef bouillon

Put rice in bottom of a 2-quart casserole. Brown pork chops. Place chops on rice. Add pork-chop drippings, next 7 ingredients. Pour beef bouillon over all. Cover; bake in moderate oven (350°) about 75 minutes or till chops are tender. —*Mrs. Ed Tutewohl, Jr., Minnesota.*

Golden Rice Squares (Makes 6 servings)

Put 1¼ cup chopped onion and 3 cups shredded carrots in saucepan with ½ cup cold water; bring to a boil; remove from heat; drain well. Add 2 cups cooked rice; stir in 2 beaten eggs, 1½ cups shredded American cheese, ½ teaspoon salt, and a dash of pepper; put in well-greased 6x10x1½-inch baking dish; bake in moderate oven (325°) 45 minutes or till firm. Cut in squares and serve with hot *Ham Mushroom Sauce. To make sauce:* combine can of condensed cream of mushroom soup, ⅔ cup milk, 1 cup cooked peas, and 1 cup cubed ham. Heat thoroughly.—*Mrs. Frank McNally, California.*

Spanish Rice with Tongue
(Makes 6 servings)

Cook 1¼ cups chopped celery, 1 cup chopped onion, and 2 minced garlic cloves in 3 tablespoons hot fat till tender. Add 3½ cups stewed tomatoes, ½ cup boiling water, 1 cup uncooked rice, 1 tablespoon brown sugar, 1 teaspoon salt, and a dash of pepper. Cook covered over low heat till rice is tender, about 30 minutes. Add 1½ cups diced American process cheese and stir till melted. Add 2 cups cubed smoked cooked tongue and heat through.—*Lena Price, Wisconsin.*

SUCCESSFUL RECIPES Tested in Successful Farming's Tasting-Test Kitchen

Cut along dotted lines

Baked Fish with Bread Stuffing
(Makes 6 servings)

- 2 pounds fish fillets or steaks
- Salt
- 3 tablespoons chopped onion
- ¾ cup chopped celery
- 6 tablespoons melted butter
- 1 teaspoon salt
- ⅛ teaspoon pepper
- 1 teaspoon sage
- 4 cups dry bread cut in ¾-inch cubes
- Butter
- Parsley, chopped
- Lemon wedges

Cut fish in strips. Line well-greased individual casseroles or muffin tins with the fish strips; sprinkle with salt. Fill with *Bread Stuffing*. To make stuffing: combine onion, celery, butter, 1 teaspoon salt, pepper, sage, and bread cubes. If dressing seems dry add a little hot water. Dot top of stuffing with butter and sprinkle with parsley. Bake in moderate oven (350°) 30 minutes or till fish flakes easily with fork. Serve with lemon wedges.—*Mrs. Kenneth Krueger, Nebraska.*

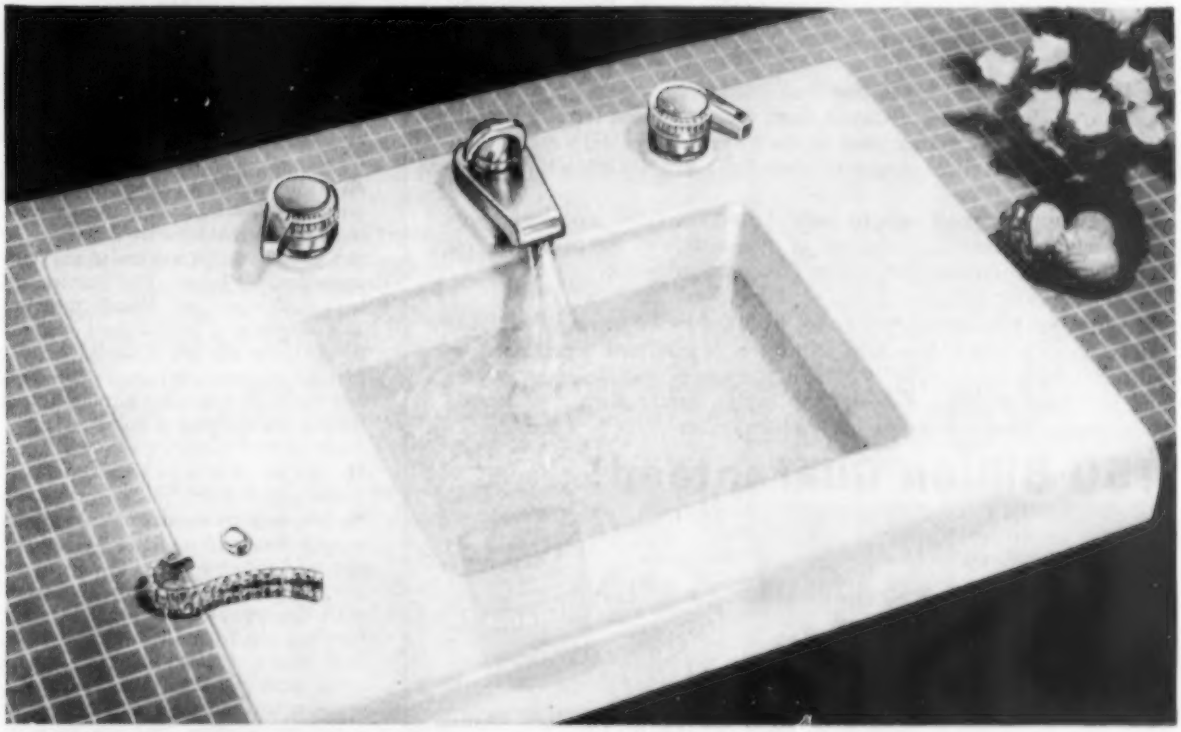
Seafood specials

Savory, well-seasoned seafood can give you many delightful eating adventures. Here is a variety of recipes to brighten Lenten meals

CRANE

The touch of luxury <u>every</u> home can have

***New and very distinctive**—the first wing-type handle sculptured out of clear Lucite. Designed especially for Crane's Criterion lavatory. Just a light touch (which operates the Dial-ese control) turns the water on or off.*



***Criterion.** Most luxurious lavatory made. Presented Gold Medal by Architectural League of New York. Seven beautiful colors and white. Prices in white start at $120.50.* Other Crane lavatories from $37.65.**

***Bath with built-in dressing room.** Notice the two Crane Drexel lavatories and the roomy counter-top. Your choice of seven colors. Prices in white start at $78.85.**

A bright new Crane bathroom gives you the same feeling of satisfaction you get from owning fine silver or china—or even a fine car.

Yet Crane, for all its beauty, doesn't cost any more. The fixtures just look that way because they're so attractively styled by designer Henry Dreyfuss. And because each piece is hand-finished to give a lifetime of satisfaction.

So why settle for less when you build, buy, or remodel? Ask your dealer for Crane. America's first choice for color and design.

CRANE CO., 836 South Michigan Avenue, Chicago 5

VALVES • FITTINGS • PIPE • PLUMBING • KITCHENS • HEATING • AIR CONDITIONING

**Suggested prices, ready to install. Lavatories are lustrous vitreous china.*

Boost Your Yields of SOYBEANS with the BONUS BILLIONS NITRAGIN nitrogen-fixing bacteria

NITRAGIN inoculation boosts your stand ★ improves your land . . . with new nitrogen fertility made out of the air. Increases yields, improves crop quality, enriches your soil.

★ **Legume bacteria** are so tiny they have to be bought on faith. The faith in NITRAGIN inoculants of more than a million farmers is built on yield increases year after year, on the 59-year NITRAGIN reputation, and on the bacteria count guarantee printed on every NITRAGIN package.

★ **The superior peat humus base** of NITRAGIN inoculants promotes multiplication and long life of the bacteria in the package. You actually get bonus billions of bacteria over the guarantee.

★ **Whether** you inoculate legumes by hand or by machine, NITRAGIN'S bonus billions of bacteria assure you of maximum inoculation results. Be sure to inoculate every soybean planting—alfalfa, clovers, pasture and Soil Bank mixtures too—for top yields, better market grade and soil benefits. Postcard brings you soybean leaflets.

450 Billion Guaranteed!

Only NITRAGIN guarantees the bacteria count—averaging 18 billion per bushel of inoculated seed. Read the guarantee on the bright orange package.

Make nitrogen with NITRAGIN

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BOSTROM IMPROVED FARM LEVEL

Accurate, Durable and Complete for Terracing, Ditching, Irrigating, Tile Draining, Grading, Running Lines, Turning Angles and etc.

The Bostrom is used and endorsed by Schools, Extension Service & Individual Landowners everywhere.

Anyone can operate a BOSTROM Level by following the simple direction booklet included with each Instrument. We manufacture 3 models; Farm Level, Contractors Level, Convertible Level. All BOSTROM Levels are sold on the guarantee of satisfaction or money back. WRITE TODAY for literature, prices and name of our distributor near you.

Bostrom-Brady Manufacturing Co.
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Keep *Successful Farming* coming your way. Each month in *Successful Farming*, you will find the kind of information that will help you increase your profits, make your farm work more convenient, and your farm living more comfortable.

Corns Lift Right Out!

SUPER-FAST RELIEF

Never before anything like it!

Dr. Scholl's Zino-pads not only give fast *nerve-deep* relief . . . ease new or tight shoes—but also remove corns one of the quickest ways known to medical science. Try them!

Dr Scholl's Zino-pads

Fair share of income

From page 55

control apparatus—actually a ceiling on opportunity.

(2) To the maximum extent feasible, to reduce government monopoly and government interference with the market system.

Q. *Do we need any new legislation for solving these problems?*

A. In general we now have the legislative authority to solve these problems. Our main weapons will be the twins of the soil bank and surplus disposal. As we approach the day when our carryovers are down to more normal levels, *we will operate programs designed to expand markets and avoid a recurrence of the surplus.*

Q. *What is your plan now to further improve farm income?*

A. Our plans for further improving farm income are to do a top-grade job of *implementing the soil bank* and of *disposing of the agricultural surpluses.* In addition, our special program for low-income farmers will help this group substantially.

Q. *We have heard some criticisms of the soil bank—that it won't cut production much. Do you share this skepticism?*

A. 1956 was not a fair test since it was put into operation after the crops were planted. The reason for the delay was the fact that legislation was not passed until approximately June 1. This year we will have a full year's test. Already there are approximately 11 million acres of wheat signed up in the soil bank. We believe that the program *will* reduce production and the crops in greatest surplus. This is what it was designed to do.

Q. *Are you satisfied with the operation of flexible supports to date?*

A. Yes. Farmers are making adjustments to price changes. *It is a fallacy to assume that high price supports will hold up farm income even though surpluses accumulate.* That is another demonstrated falsehood. In every year but one from 1947 through 1955, farm income declined—and in all these years, until mid-1955, high, rigid price supports were on the statute books and completely in effect. It was under these price supports that our present farm problem developed. In other words, if the high, rigid price supports we had until 1955 were the answer to our problem, we would have no problem.

Grandmother's face

Like some fine bit of Persian lace
Or patina of a rare antique,
The lines etched on grandmother's face
Are priceless and unique.
This artistry life wrought with care
Recording every thought and deed.
The pattern of her soul is there
For all the world to trace and read.

—**Vivian Buchan**

Service Station on Wheels *saves time and money*

"FILLING STATION" for servicing farm machinery in the field without waste of time is shown here with Robert Smith of Ritzville, Washington, and Texaco Consignee Paul Meyer.

ROBERT and VERNON SMITH operate a 1280-acre wheat farm. They developed this "service station on wheels" for fast fueling and lubrication of machinery during field work. It carries two 150-gallon tanks, one for Fire Chief gasoline and the other for Diesel Chief fuel. Most important, it has an air compressor for lubrication, complete with long hose and fittings. These brothers know the value of constant lubrication – their machines are greased regularly with MARFAK.

In addition to having a plentiful supply of MARFAK on the field truck, their farm headquarters shop has for eight years been fully stocked with other Texaco products.

Progressive farmers like these, *everywhere*, have found that *it pays to farm with Texaco products.*

FRISKY "HAY BURNER" held by B. V. Montgomery of near Eaton, Ohio, is admired by Texaco Consignee H. J. Miller (second from right), who provides Mr. Montgomery with Fire Chief gasoline and always *dependable, on-time* farm service for other Texaco products.

IN TOWN OR ON THE HIGHWAY—wherever you drive—in all 48 states – you'll find Texaco Dealers *serve you best.* High octane Sky Chief gasoline, super-charged with Petrox, to assure maximum power and cut engine wear . . . famous Fire Chief gasoline at the *regular* price, both 100 per cent *Climate-Controlled.* Also Advanced Custom-Made Havoline Motor Oil and Marfak lubricant.

ADVANCED CUSTOM-MADE HAVOLINE MOTOR OIL wearproofs truck, tractor and car engines – gives added power, longer engine life, greater gasoline mileage. No other oil can match it, *regardless of price.* J. T. Pitts, San Benito, Texas, gets Havoline and other Texaco products from Texaco Consignee A. L. Dodson.

ON FARM AND HIGHWAY IT PAYS TO USE

TEXACO

PRODUCTS

DIVISION OFFICES: Atlanta, Ga.; Boston 16, Mass.; Buffalo 9, N. Y.; Butte, Mont.; Chicago 4, Ill.; Dallas 2, Tex.; Denver 3, Colo.; Houston 2, Tex.; Indianapolis 1, Ind.; Los Angeles 15, Calif.; Minneapolis 3, Minn.; New Orleans 16, La.; New York 17, N. Y.; Norfolk 2, Va.; Seattle 1, Wash.

Texaco Products are also distributed in Canada, Latin America, and Africa.

TUNE IN . . . Metropolitan Opera radio broadcasts every Saturday afternoon. See newspaper for time and station.

THE TEXAS COMPANY

RED BRAND®

More Croplands to Grass? try the RED BRAND Formula

If you have livestock, chances are you *can* afford to turn more croplands to grass. One reason is that improved grassland *can* give you more feed.

Pennsylvania State University got feed value equal to 137 bushels of corn in alfalfa-orchard grass meadow. They got feed equal to nearly 100 bushels with birdsfoot-timothy-Kentucky blue grass seeding.

A Montana study reveals that nutrients per unit of cropland from roughages greatly exceeds that from small grains.

Another reason is that cost is cut by better than half, and per man-hour dollar returns increased up to six times.

If you are the wise farmer converting from crops to grasses and legumes, you'll want the easy-handling qualities of RED BRAND fence and barbed wire. RED BRAND is easily adapted to grazing rotation on small plots that give you maximum feed value from pastures.

Only RED BRAND is *Galvannealed*®. RED BRAND, which has zinc fused deep into the wire, adds years of extra life.

The wise farmer wants RED TOP Steel Posts, too. These tough posts that are made of springy rail steel and reinforced with extra ribbing from top to bottom, are more durable and easier to handle.

Ask your RED BRAND dealer for the Pasture Management formula. Request literature on soil conservation, pasture feeding and fence erection.

KEYSTONE STEEL & WIRE COMPANY
Peoria 7, Illinois

RED BRAND® Fence • RED BRAND® Barbed Wire • RED TOP® Steel Posts • Non-Climbable Fence • Keyline Poultry Netting • Ornamental Fence • Nails • Gates • Bale Ties

Buy nitrogen

From page 25

the price per ton gave a total cost, at the track.

The going delivery rate of $3.09 a ton multiplied by the total tons and added to the cost gave total cost on the farm.

Getting the nitrogen on the ground was part of the program. Harry used the custom application rates to figure this step. These figures, added to on-the-farm cost gave a grand total cost applied.

The last—and key—step was dividing each total-cost-applied figure by 20,000 to get the cost per pound of N applied.

What did Harry do? He decided first of all to apply the fertilizer himself. He had the time, and could put it *where* he wanted it, *when* he wanted it on.

He bought a second-hand applicator and applied anhydrous ammonia. The dealer supplied the 1,000-gallon nurse tank at no charge. Harry hauled it.

Pushing a pencil can make you money. Work out your chart and see. But don't rush to the checkbook. There are other points to consider.

The different nitrogen carriers contain nitrogen in different forms. The soil, the moisture conditions, the crop, the method of application, all influence the final benefits you will get.

Apply liquid fertilizer

From page 26

of plant food per 100 pounds of material.

Outstanding feature of complete liquids is the time and labor saved in handling and applying. Tanks, pumps, and hoses do the work.

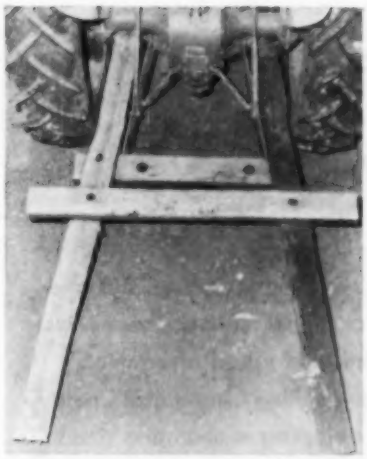
Here are some points to keep in mind when putting your equipment together. Use steel and cast iron and eliminate corrosion. Mild steel, stainless steel, and black iron are popular materials. Brass and bronze will give you trouble. Most aluminums will also corrode. Noncorrosive aluminum tanks are now being developed. Flush the system thoroughly with water after each day of operation.

Straight gravity-flow systems are popular because they are easily assembled. Studies at University of Illinois by Engineer Wendell Bowers show that rate of gravity flow is not exactly uniform. Bowers states, "The rate of flow through a nozzle with gravity feed is proportional to the square root of the head."

Divide the end of a tank into thirds and you can see how the head changes. You can cut down this difference in flow by placing the nozzle as far below the bottom of the tank as possible. Placing nozzle 4 feet below tank cuts the difference in flow 4 percent more than a nozzle placed 2 feet below the tank bottom.

Liquid fertilizers give you an excellent method of applying soil insecticides. You can buy concentrated emulsions and add to fertilizer upon application. Excellent for starter fertilizer.

Handy feed-bunk mover



To build this carrier lay two 6½′ half-posts on 2x6 resting on drawbar. Consider angle of drawbar side arms and position of wheels. Let ends of posts extend slightly ahead of axle. Put bolts outside drawbar ends. Inside set of bolts hold unit to drawbar. Second crosspiece keeps ounk or a platform from sliding into wheels when the load is raised

Photographs: Author

This simple, handy feed-bunk mover was built by Edward Voorde, Galva, Iowa.

The hydraulically raised drawbar is the source of action in lifting the carrier. With the forward ends of the half-posts over the rear drawbar plate and under the rear axle, the axle is the fulcrum. With power applied to the lift, the post arms swing up to lift a load placed on them.

In the lowered position, the outer ends of the arms will touch the ground. In the raised position they will be about 4′ off the ground. Using only the 2 mounting bolts, it is easy to mount or remove the unit in a few minutes.

Not only is this mover handy for moving feed bunks but it can, with boards put across the posts, be used for lifting and hauling water, fencing supplies, sacked feed, seed, or fertilizer, bales of hay or straw, and almost any other object that will fit the platform—*Ken Hadenfeldt.*

THE LOW-COST "LABOR-SAVING" WAY

FARNAM Automatic Rope-Wick Oilers

The modern, money-saving way to control stock-pests! Now recommended by State Colleges, Experiment Stations, and Stock-Pest Authorities everywhere.

*Patents Pending

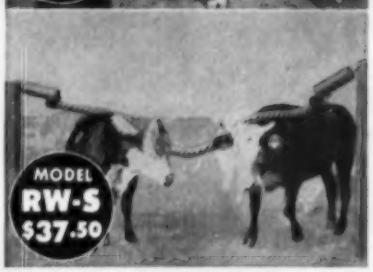
FAST REPLACING SPRAYING!

HERE'S WHY!... It costs less to control stock-pests with Automatic Rope-Wick Oilers. *Less insecticide* is required to do an effective job. Less labor is involved. You *save* on insecticide, *save* the labor involved in spraying, and avoid costly round-ups.

A Sound INVESTMENT

Whether you are a breeder, feeder, dairyman, or range cattleman *makes no difference.* Rope-Wick Oilers will prove a paying proposition. Low initial cost! Little or no maintenance! Economical use of insecticides! Rope-Wick Oilers are fully automatic, do *not* require constant refilling, and are built to take a beating. Animals *can't* tear them up, and *won't* wear them out for years to come.

For Complete Information on Automatic Stock-Pest Control and Illustrated Literature on Rope-Wick Oilers, mail coupon below or write—



Mail this Coupon FOR 30-DAY "FREE TRIAL" OFFER

FARNAM Companies Dept. 64
8701 No. 29th St. - OMAHA, NEBR.

Okay, send Rope-Wick Oiler literature offered, and 30-day "Free Trial" Plan, without cost or obligation, to—

Name _____

Address _____

City _____ State _____

ARTICLE REPRINTS FROM SUCCESSFUL FARMING AVAILABLE

Ideal for farm groups. To receive an *exact* price, give title of article, magazine issue, and quantity wanted (100 or more). *Approximate* prices for two-page, magazine-size black and white reprints: 100 copies, $39.00; 500 copies, $44.00; 10,000 copies, $131.00. Write to Successful Farming, Des Moines 3, Iowa.

Walter and Don Knapp
Fabius, New York

"How we're managing to make money dairying"

Orville Engst
Fabius, New York

Richard Houck
Manlius, New York

The dairy picture is changing fast. No one knows this better than dairymen themselves. Here's an on-the-farm report of how top dairymen in high-ranking Onondaga County, New York, are adjusting to changing times

---

TAKE YOUR

Single wheel. A powerful tractor that "handles like a dream"—excellent for most irrigated row crops, and tops in narrow-spaced crops. You get pinpoint steering accuracy with Ford's work-easy power steering (standard on all Ford row crop models). Up-front cultivators of drive-in, quick hook-up design make easy work of cultivating crops like corn and cotton. The design of the front-wheel support means less chance of clogging from mud and trash—another Ford exclusive.

Wide-adjustable front axle. If your preference is for the stability, flotation and ease of handling provided by the four-wheel design in plowing, seed-bed preparation and heavy harvesting operations, Ford has it here—and yet it lets you have "up-front" cultivation with drive-in, quickly attached cultivators. Try Ford's power steering, power adjusted rear wheels and all those other features that make Ford the best year-round tractor on the farm.

Ever get a yen to peek over the shoulder of a fellow dairyman to see what he's doing, and what he plans to do, to put a little more cash in his pocket? Well, here's your chance.

As dairy counties of the nation go, Onondaga County, New York, is among the top. So that seems a logical spot to go look around. And four of the men you would visit there are pictured at the left.

While you walk around their farms, getting acquainted, they'd open up the conversation on general rules they follow something like this:

- Have enough cows and acres to meet today's tough competition.
- Grow and *harvest* plenty of high-quality silage and hay to reduce your costs of producing milk.
- Get big crop yields per acre by using the best varieties and plenty of fertilizer.
- Cull your low producers and increase milk production of your herd.
- Cut your labor costs to the bone by laborsaving methods—but watch that the investment in machinery doesn't get too high per cow and per acre.
- Keep good records on all phases of your farm business so you can spot weak links, profitwise, and make changes before it's too late.

Then, as you get better acquainted, each would open up and tell you about his specific operation, what he's done in the past 5 to 10 years as he saw changes coming, what he's working on now, and what he is aiming for in the future. But let's move in closer and listen.

Orville Engst, who farms just east of Fabius, started with 30 Holstein milkers, now has 90—plus 100 head of young stock. Plans call for 20 more milkers in the herd as soon as more stanchions are built.

Orville's 1955 record looked like this: Herd average, 12,000 pounds of milk, 450 pounds of butterfat per cow; 25 cows per man and 278,000 pounds of milk sold per man. His particular specialty is grassland dairy farming.

"I increased the size of my business to keep my head above water, to pay the bills as milk prices went down.

"Small dairy farmers around here are in hot water. Not very long ago, an efficient *one-man* dairy farm had 15 to 20 cows. But that isn't an efficient size any more. Today it takes 25 to 30 cows per man.

"In our case it meant getting more pasture and hay land and investing more money for barn space and stanchions.

"An all-grass silage, hay, and pasture program seemed to be the best answer for us—and it was." Here Orville's operation differs from the others. He doesn't raise grain on his farm. In fact, he does very [*Turn to page 86*

PICK!

Dual wheel. This model has won farmers' praise everywhere. It offers the crop clearance most farmers like for working normal-spaced row crops, yet it maintains all the convenience features that have made Ford Tractors so popular. It's an excellent match for the outstanding Ford 2-row mounted corn picker—the picker that cuts shelled-corn losses in half. Find out more from your nearby dealer.

For row crop work

THEY'RE ALL FORDS

When you pick Ford you get: Ford's famous live-action hydraulic system and 3-point linkage; a bonus of power from Ford's "Red Tiger" engine, known for its economy and long life; unusual maneuverability, and Ford's low prices. Its easy-on-the-operator design coupled with one of Ford's "pick-up-and-go" family of implements — the largest yet — gives you the truly modern way of farming with less fatigue, at the greatest cost savings for greater profits.

See for yourself. Stop in at your Ford Tractor and Implement dealer's.

FORD TRACTOR HORSEPOWER HAS MORE THAN DOUBLED!

Don't let

SCAB TEATS

BRUISED TEATS

OBSTRUCTIONS

Close The Teat Canal

Dr. Naylor's Medicated Teat Dilators act both medically and mechanically to provide antiseptic protection, reduce inflammation and maintain free milk flow through the canal of hard milking teats. They provide gentle, non-irritating support to delicate lining of teat canal. Keep end of teat open in its natural shape to promote normal healing — natural milking.

ANTISEPTIC

Dr. Naylor Dilators are medicated protective dressings for the teat canal. Contain SULFATHIAZOLE — this medication in the Dilator is released slowly in the teat for prolonged antiseptic action directly at site of trouble.

EASY TO USE. Simply keep a Dr. Naylor Dilator in teat between milkings until teat milks free by hand. Fit either large or small teats. At drug and farm stores or mailed postpaid.

H. W. NAYLOR CO.
Morris 15, N.Y.

Large pkg. $1.00
(*15 Dilators*)
Trial pkg. 50¢
(*16 Dilators*)

Dr. Naylor's MEDICATED Teat Dilators

Recipe for Color 35-mm filmstrip, commentary, 12 booklets—$3.95. *Successful Farming.*

DRIED MOLASSES

Omalass

for

PRESERVING SILAGE
SWEETENING FEEDS

Omalass is 85% blackstrap molasses, dehydrated. Takes less, costs less because it's concentrated and there's no waste. Guaranteed dry, free-flowing. Write for folder.

FREE

Magnetic Breeding Calculator
if you send local feed dealer's name

Omalass 1901 E. EUCLID DES MOINES 13, IA.

Make money dairying

From page 85

little plowing on any of the 640 acres, and when he plows it's to reseed hay or pastureland. 'Why?' you ask.

"I can get several hundred dollars' worth of feed off of an acre of good pasture," he says, "but only $40 to $50 from an acre of oats. It's cheaper for me to buy a carload of grain at $50 to $60 a ton than to raise it. Furthermore, producing grain takes too much labor and additional machinery.

"I buy 3 or 4 carloads of grain at a time—during the fall when the price is lowest. The grain is delivered in bulk and put into storage bins over the stables. We never have to lug it around.

"We make the most milk on 8 Ladino pastures. The cows are put on 4 of them in the spring and 4 are cut in the latter part of May or the first week or two of June and put in the silos. As soon as these 4 pastures come back, we pasture all 8 in rotation.

"Our alfalfa hay is cut early, too—in the prebloom or early bloom stage of maturity—for higher protein content. And the results really show up in the milk pail. The first cutting is nearly always in the silos by June 15 or June 20. The second cutting is baled and put on the hay dryer to improve quality."

Before leaving the farm, you ask this efficient dairyman what he would do if he were to start all over again. His reply:

"I'd buy a farm without a conventional barn and build a pen-stabling arrangement. The cost would be less, and I could handle more cows more efficiently. If I wanted to add 15 or 20 cows I could do it with little or no additional investment. When I add 15 or 20 stanchions to my present conventional-type barn, the cost eats up all the profit for a long time. I believe the farmer who survives in the years ahead is going to have to move in this direction."

Walter Knapp and son, Don, a few miles down the road, have expanded, too. At first there were only 100 acres—the Knapps now have 200 acres on the home place, 96 acres on an adjoining farm they purchased, and 40 rented acres. A small milking herd has climbed to 72 Holsteins and all replacements are raised on the farm.

The Knapps' operation is one of the best in the state—a 1955 efficient production award winner. Their cows averaged 11,423 pounds of milk, 424 pounds of butterfat (10 years ago it was 350 pounds); milk production per man, 273,773 pounds.

Don and his father believe in producing grain because they have land that's better suited for it. They have 40 acres of corn silage and 100 acres of small grains. But like Engst, they tell you that their low feed cost per hundred pounds of milk is due mainly to high-quality, early cut forage—alfalfa and bromegrass.

In 1956 they tried the new Narragansett alfalfa for the first time—on the recommendation of the county agent and of Cornell University specialists. Both Knapps emphasize that "keeping up with the newest information like this from the Extension Service is a main key to efficiency."

Before leaving you might ask Walter Knapp about his machinery investments. He says, "It's important to have enough laborsaving equipment because good labor is still hard to get and it's high. But you need enough work for this equipment. A hay baler, for instance, will bale enough hay for 70 cows as well as for 20. And this applies to most equipment."

Richard Houck of Manlius is a young dairyman—another efficiency winner—who shows you a different wrinkle on machinery investment. Combining and silo filling on his farm are *handled by custom operators*. Houck tells you it's cheaper for him to hire these jobs done on his farm than owning the equipment.

Moreover, he farms his 210 acres with very little and sometimes no hired help. And look at the results: His 28 milkers average 14,100 pounds of milk per cow, 519 pounds of butterfat. Milk production per man totals up to a big 316,000 pounds.

"How do you get this kind of production?" you ask him. He tells you, "Feeding is a big factor in high production. And the best pasture and hay I can produce pay the highest dividends. To get faster, earlier growth on my pastures, I'm shifting from 0-20-20 to 8-16-16. I'll spread plenty of lime, too.

"Most of my herd freshens in the fall—from July to September—when milk prices are highest. I ship into Syracuse and get a production bonus during those months.

"I raise all my own replacements and work hard on the best management practices so that my herd turnover is low. If one of my new heifers won't give 35 pounds of milk a day, however, I figure she's not worth keeping.

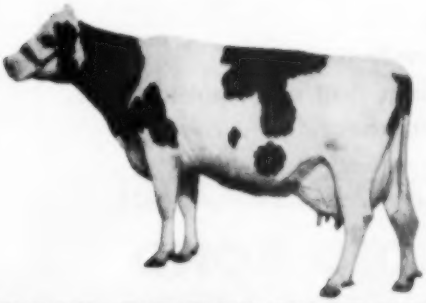
"In the future I plan to increase my milking herd to about 38 cows—if I can get some help. The herd can be expanded without any major remodeling of my barn."

These are the trends, the line of thinking, the adjustments being made by top dairymen. Consider your own operation in light of these changes. Borrow ideas that fit and plan ahead. This planning calls for close attention to management in every phase of your business. It's necessary to *stay* in business.

Behavior pattern

You'll probably find since Time began,
Most little lads
Learned their manners at Mother's knee,
Or over Dad's.

—**Stephen Schlitzer**



"OFFICIAL WORLD'S RECORD* FAT PRODUCER HAS ALWAYS BEEN MILKED WITH A DE LAVAL MILKER,"

writes: R. B. McLAUGHLIN, owner of Haven Hill Crescent Gewina Count.

*1523.0-lbs. FAT 38,878-lbs. of 3.9% MILK

"Our record-breaking cow, Haven Hill Crescent Gewina Count, has always been milked with a De Laval Milker (Magnetic). We never have mechanical trouble with our units, nor has there been any udder damage.

Probably the best testimonial I can give for the De Laval is that the udder of this great cow has retained the same shape, and is as soft and pliable as when she was a two year old. Moreover the entire mammary system was officially classified "Excellent" last February. During her life she has probably been milked by from 25 to 30 men, who with all their individual traits, made no apparent difference since the actual work was done by the De Laval unit."

DE LAVAL
SEPARATOR COMPANY

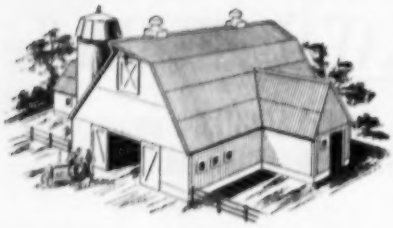
R. B. McLAUGHLIN also writes: "RECENTLY WE INSTALLED A DE LAVAL COMBINE MILKER® ALONG WITH A DE LAVAL BULK COOLER, WHICH WE BELIEVE WILL HELP US CONTINUE TO PRODUCE HIGH QUALITY MILK WITH GREATER SAVINGS THROUGH LESS TIME AND LABOR REQUIRED."

THE DE LAVAL SEPARATOR COMPANY Poughkeepsie, New York • 427 Randolph St., Chicago 6 • DE LAVAL PACIFIC CO. 201 E. Millbrae Ave., Millbrae, Calif.

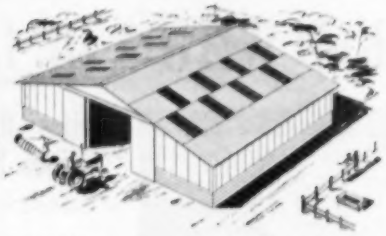
GIL BURROUGHS
(Gold Bond Farm Specialist) says:

"For farm buildings that are weatherproof, fireproof, maintenance-free . . .

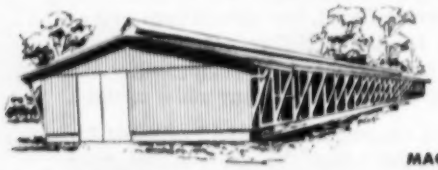
BUILD OR REMODEL WITH GOLD BOND ASBESTOS-CEMENT PRODUCTS"



STORAGE BARN – Get an *extra* lifetime of service from your old barn by nailing sturdy panels of Corrugated "Economy 250" over worn walls and roof. Building a new barn? No rough siding needed; just nail it to the wood frame.



POLE BARN – You can build this sturdy, low-cost pole barn yourself! "Economy 250" roofing and Permaboard siding give your valuable livestock and machinery permanent, fireproof protection all year round.

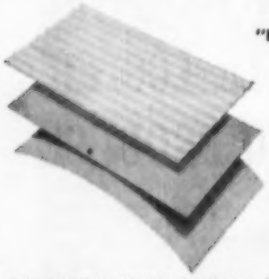


POULTRY HOUSE – Designed at Louisiana State University, this house will give your chickens year-round temperature protection for maximum poultry livability. The roof has Gold Bond Insulation Board *under* "Economy 250"!

MACHINE SHEDS – Protect your costly farm machinery and tools by storing them in this sturdy shed. It's fully weatherproof because roof and walls are covered with asbestos-cement Permaboard sheets. And it's fireproof!

RANGE SHELTER – Low-cost, year-round shelter for your poultry to insure healthy, rapid growing stock and provide permanent housing and roosting quarters. "Economy 250" is easily cleaned with a hose; will *never* rot.

HOUSES – Old houses look new again when they're covered with Gold Bond Siding. Many lovely colors and textures to choose from . . . deep shadow-line and surface texture give added beauty. And they never need painting!



"ECONOMY 250," PERMABOARD, PLIABOARD – "Economy 250" gives permanent strength and protection to roof and walls; Permaboard, an economical heavy-duty panel, is an ideal covering for both roof and walls; Pliaboard is a premium-quality panel that's easy to bend on curved surfaces. See your local Gold Bond® Building Products dealer.

PROTECTION AGAINST FIRE! You'll have a building with roof and walls as fireproof as stone – because these Gold Bond Products are made of cement *and* asbestos! A careless cigarette or burning ember can't ignite them. Our "Asbestos on the Farm" kit contains plans for building with these products. For your kit, send 10¢ to National Gypsum Company, Dept. SF37, Box 73, Buffalo 13, New York.

Gold Bond
BUILDING PRODUCTS

NATIONAL GYPSUM COMPANY

Check bulk-tank driver

The bulk-tank-truck operator has a responsible position in the bulk-milk-pick-up operation. You may want to watch his procedure once in awhile.

Your job is to provide convenient facilities for washing his hands, rinsing the tank after emptying, and other routine operations in the milkhouse.

The tank-truck operator should generally follow this procedure:

1. Wash hands.
2. Check the milk in the tank for odor and for visible indications of poor quality.
3. Record the volume and temperature of the milk.
4. Start the agitator.
5. Attach the tank-truck pump hose.
6. Take samples for butterfat and quality tests after the agitator has run for sufficient time to ensure proper mixing—usually at least 3 minutes.
7. Start the pump on the tank truck and empty the farm tank.
8. Stop pump and close the tank-truck valve. Then disconnect the tank-truck hose.
9. Thoroughly rinse the farm tank, where that is in the agreement, with water at 100-110 degrees to remove any milk sticking to the tank walls.
10. Remove the outlet valve, pipe, and measuring stick and put them in the wash vat; likewise the agitator, if possible. Otherwise leave the outlet valve open to drain tank.

"GESUNDHEIT!"

Frank Walter OF FREEPORT, ILL., SAYS:

Frank Walter gets an early start on spring plowing—and a smooth-tasting Viceroy goes along with him.

Smooth!

From the finest tobacco grown, Viceroy selects only the Smooth Flavor Leaf. No other will do!

Extra Smooth!

Each Smooth Flavor Leaf is specially Deep-Cured, golden brown through and through, for *extra* smoothness!

Super Smooth!

Only Viceroy smooths each puff through *20,000 filters* made from pure cellulose—soft, snow-white, natural!

Frank Walter

raises a large crop of corn and other grains as well as fine hogs, sheep and poultry on his Green Springs Farm near Freeport, Ill. Mr. Walter's years of farming experience have led him to make a careful check before selecting any product—and after trying all the leading brands, he chose Viceroy as his cigarette. "Smoother—by far!" he says.

©1957, Brown & Williamson Tobacco Corp.

Coming—sterilized milk!

Line up your milk bottles on the window sill, if you like, and use them as you need them without taking up a lot of room in your refrigerator.

That's how scientists at Michigan State College are trying to perfect the process of cold sterilization.

Pasteurized milk, as you know, proved a tremendous boon to the safeguarding of our health. The process merely subjected milk to temperatures that would kill most disease-causing bacteria. This made it safe for us to drink without worry.

Pasteurized milk still sours

But the process, though killing disease-causing bacteria, did not kill the organisms that cause milk to spoil.

So, we developed a method that's very costly to chill the milk from the time the cow is milked until we drink it in our homes. This refrigeration didn't kill milk-spoilage organisms either, but slowed down their rate of growth so milk could be stored in refrigeration for longer periods. It's chilled on the farm, in the trucks that haul it to processing plants, in the bottling plants, in stores, and at home.

But, all that will not be necessary some time in the future if the researchers' preliminary indications prove practical.

Sterilization kills all bacteria

In the future, the bottling plant may be able to subject fluid milk to an electron beam that will kill all bacteria, rendering milk sterilized. Then it can be bottled and stacked on open shelves.

Or, possibly, some time in the future, it may be practical to install the electron beam generator on the farm where milk can be treated while flowing from the milking machine to the holding tank. This would really cut down on the need for refrigeration.

In the past, milk has been sterilized. But, such sterilized milk has carried a changed flavor because of the high temperatures used to get the bacteria kill.

But the cold sterilization method with the electron beam generator would not involve as much heat as is used in present pasteurization methods.

The machine in use looks very much like a large X-ray machine. It fires electrons like bullets at the milk at very high speeds. And it's the electrons that actually do the job of killing off disease and spoilage organisms in the milk to make it sterilized.

Leon Newcomer, agricultural engineer, Michigan State University, is one of the men working on this project.

Sand egg cooler

A sand egg cooler such as used here by Mrs. Forrest Waller, Buchanan County, Missouri, is as efficient as necessary for producers selling on a graded-egg market.

Missouri University poultryman E. M. Funk says this type unit, which consists of a slatted platform mounted on 2x's and filled with moist sand, is satisfactory for eggs marketed weekly. Enough water must be used to keep the sand moist. Effectiveness can be increased by using a burlap curtain around the entire box and stored cases to help hold the moisture.

Experimental work at the college shows eggs kept in refrigerated coolers maintain a higher quality but this difference is very slight.

Important message for farmers!

Increase yields and save work with HEPTACHLOR-FERTILIZER MIXTURES!

SMALL GRAINS, SORGHUMS, AND LEGUMES, as well as corn, can be ruined by corn rootworms, wireworms, cutworms, seed corn maggots, white grubs, Japanese beetle larvae, root weevils, and other soil insects. Some areas are infested with one insect, easily identified. In others, many different insects attack crops.

VALUABLE FERTILIZER CAN BE WASTED on a field infested with soil insects, because growing plants are cut off from nutrients and moisture. Heptachlor in fertilizer prevents this waste.

AGRICULTURAL EXPERIMENT STATION TESTS and field use have proven that Heptachlor controls soil insects effectively from seed to harvest, without harming beneficial soil organisms.

INSECTICIDE FERTILIZER MIXTURES save you 50% of fuel, labor, and time, because one application does two jobs. They're safe to handle, too!

YOU'RE DOLLARS AHEAD with Heptachlor-fertilizer mixtures, because they increase yields 10% to 100% for just a few dollars per acre. See your dealer today for Heptachlor-fertilizer mixtures! Or, buy an insecticide containing Heptachlor separately, and either mix it with fertilizer yourself, or apply it separately.

INSECTICIDE FERTILIZER MIXTURES INCREASE CORN YIELDS

At a recent National Corn Picking Contest, a plot given fertilization and irrigation yielded 52.8 bushels per acre, while a plot given the same treatment plus Heptachlor insecticide yielded 102.9 bushels, an increase of 50 bushels, or 49%! The results of soil insect damage to seeds and roots are shown here: lodged, goose-necked stalks (left). Compare this to a healthy stalk (right). Soil insects are especially prevalent in fields that have been in sod, fields that have been in corn more than one year, and fields that have been out of corn only one year.

HEPTACHLOR KILLS these soil insects . . . and many others!

Corn Rootworms • Wireworms • Seed Corn Maggots • White Grubs
Japanese Beetle Larvae • Root Weevils

Get fertilizers containing America's leading soil insecticide . . .

HEPTACHLOR

. . . and stop soil insects dead!

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VELSICOL CHEMICAL CORPORATION
330 East Grand Avenue, Chicago 11, Illinois

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"It's just like Oliver had asked all the farmers, '*Now what is it you want most in a tractor?*' Then they built everybody's 'wants' into this Super 77. One man wants power. Well, here's the power to pull up to four bottoms. Another fellow wants his comforts—and here *they* are. Key starting, just like a car. A seat even *better'n* a car. Here's an independent PTO...handy 'Hydra-lectric' controls...even a power shift to move your back wheels in or out! Take the diesel, like I did, and you can knock two-thirds off your fuel bills. You'll say the same as I do: Oliver gives me the power to produce at the lowest possible cost."

Buy your new tractor
on the
"Pay as you Produce"
purchase plan
Ask your Oliver Dealer

YOUR OLIVER DEALER PROMISES: "You'll never find Oliver dragging when it comes to supplying the features farmers want. That's because the *farmer* is Oliver's big business—always has been, and always will be."

The Oliver Corporation, 400 West Madison St., Chicago 6, Ill.

OLIVER **OLIVER**
"FINEST IN FARM MACHINERY"

STOP PAIN INSTANTLY

COMBAT INFECTION PROMOTE HEALING

WITH SOOTHING

Campho-Phenique

(PRONOUNCED CAM-FO-FIN-EEK)

USE IT FOR

FEVER BLISTERS
COLD SORES, GUM BOILS

Not only do fever blisters heal faster, but the same thing happens when Campho-Phenique is used on cold sores, gum boils. Wonderfully soothing too, for minor burns, poison ivy, itching of insect bites. And Campho-Phenique is a highly effective, pain-relieving antiseptic for minor cuts and scratches from paring knives, can openers, tin cans, etc.

Used on pimples, Campho-Phenique helps prevent their spread and re-infection.

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CHAIN SAW

the finest chain saw ever made
. . . powerful, rugged but lightweight

You can zip through the biggest cutting problem in practically no time with this one man workhorse. 18 deluxe features make this new Trams the finest chain saw ever made . . . easy to operate and built to last for years. *Models from $169.95.* Send today for FREE folder with all the facts.

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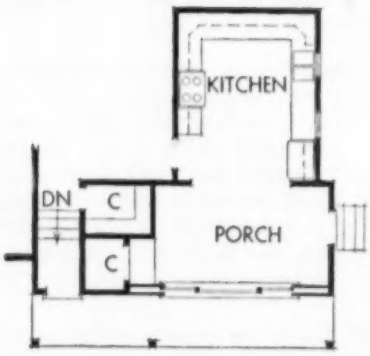
Many choice territories available—write for complete information.

TRAMS MANUFACTURING CO.
(CHAIN SAW DIV.)
5520 South Shore Drive, Chicago 37, Ill.

Favorite room in the Compton house is this remodeled family dining room, once the glassed-in back porch. With no partition into the kitchen, it's a play place for youngsters on rainy days. Everyone enjoys the view created by sliding windows which can be pushed open for summer ventilation. Green splatterdash-pattern linoleum covers floor

This family dining room was the porch



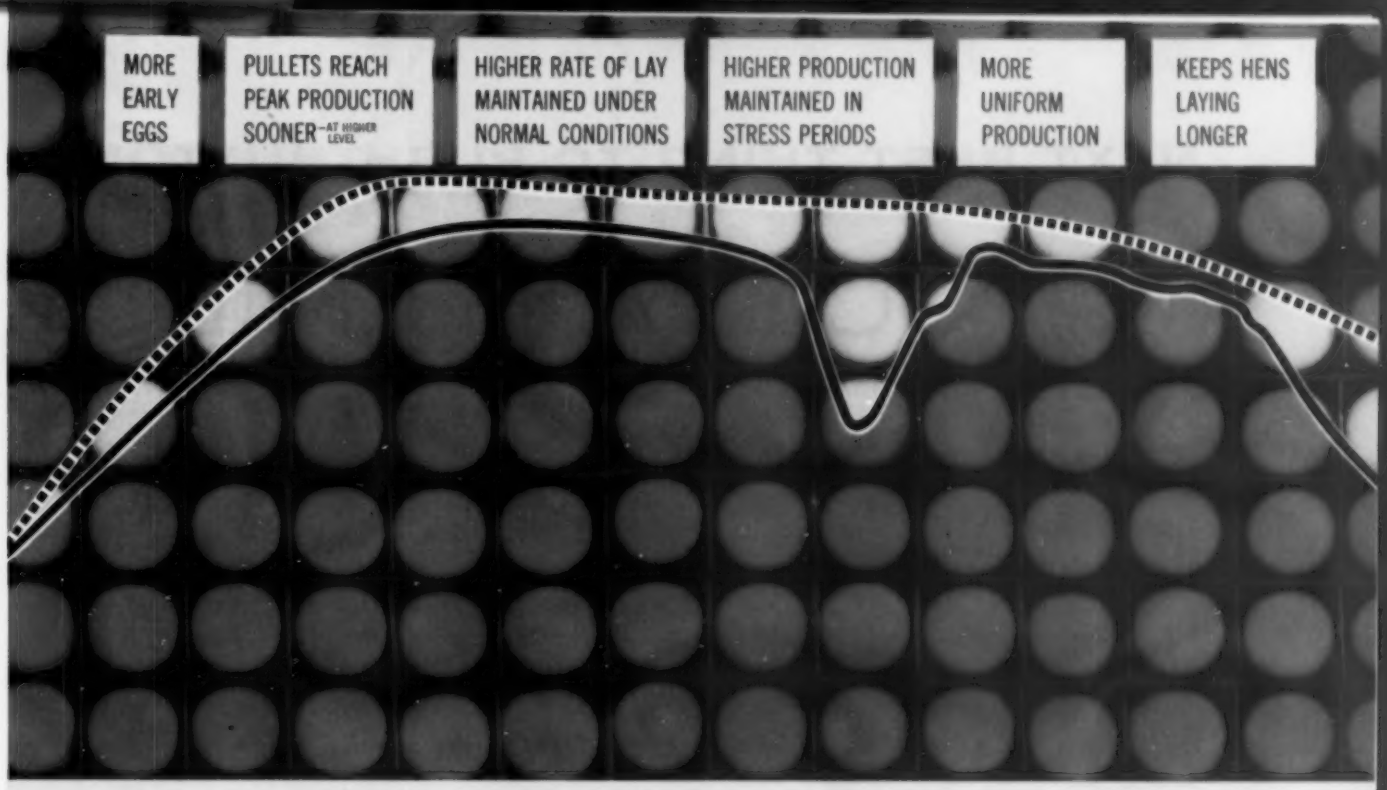
Sally and Dave Compton, near Elburn, Illinois, faced the same problem of many young farm couples with the purchase of their farm—an outdated house. The center section of the house was over 100 years old, and the kitchen and typical glassed-in back porch had been there 60 years. The unheated porch, used only in summer, was extravagant use of floor space for Sally, Dave, and the younger Comptons.

Remodeling started with the kitchen and porch. Sally and Dave already have a more comfortable home.

Photographs: Hedrich-Blessing

Front stoop, extending full width of dining room, is in harmony with the structural lines of the house. Stoop was added when glassed-in porch became part of the house interior

Supporting beam, a necessary part of remodeling, makes an attractive frame for the kitchen. Cabinets are made from the same type plywood as dining-room-wall paneling



Here's how you can now make up to $1.00 more per hen per year with

NEW EXTRA-PRODUCTION LAYING FEEDS

CONTAINING TERRAMYCIN

The chart above shows how a new kind of feed helps you get from 6 to 37% more year-round production from your flock.

It is based on results of long-term feeding trials at leading universities and commercial research farms. The lower, solid line (▬▬▬) shows typical normal production. The dip is a laying slump common this time of year.

The upper, dotted line (▬ ▬ ▬) shows what happens when the flock gets the right amount of Terramycin in their feed. Pullets come into peak production sooner. They maintain a higher rate of lay each month under normal conditions. Higher production is maintained under stress conditions, such as bad winter weather. Production is more uniform. Older hens keep laying at a profitable rate over a longer time.

Use of feeds containing extra Terramycin for extra production also gave important savings in feeding costs, even though the feeds cost a few cents more per bag. On the *average*, users got two dozen more eggs from each 100 pounds of feed. Average extra profit over feed costs amounted to $512.22 per year per 1,000 birds

Many brands of extra-production laying feeds are now available. Others are on the way. To get the most eggs for your feed dollar, ask your dealer for an extra-production laying feed containing Terramycin.

Terramycin®

BRAND OF OXYTETRACYCLINE

NEW WAY TO GET MORE EGGS

Chas. Pfizer & Co., Inc.
Brooklyn 6, N.Y.
World's largest producer of antibiotics

Pfizer

NEXT BEST THING TO PUSH-BUTTON

Cultivating with a

You have finger tip control of one, two or three independent hydraulic circuits.

You have selective control of front cultivator rigs to finish out point rows. Outfit shown here is the new "520" with Two-Row Cultivator.

The 2-3 plow "420" Series Tractors have many special features to make cultivating easier. Here is the tricycle model with big-capacity four-row cultivator.

NEW CUSTOM POWR-TROL

offers you

Delayed Lift...

Selective Lift...

Down Pressure

for faster, easier cultivating

You've no idea how much easier it is to do good work at cultivating time until you've handled a new John Deere Tractor and Cultivator in the field. For the first time, you'll come in from a long day without tired arms and shoulders, without a sore back or a stiff neck. That's because John Deere has taken all of the hard work out of hooking up the cultivator . . . all of the muscle work out of operating the rigs singly or in unison . . . all of the fight out of steering . . . all of the strain out of watching the rows.

Truly, cultivating with a John Deere is the next best thing to push-button farming—and your John Deere dealer is eager to prove it to you. See him soon.

John Deere Cultivator Features:

Quik-Tatch — on or off in ten minutes or less, without hard work. ***Clean Design*** with no obstructions to interfere with view of work. ***Fully Adjustable*** for crops grown in 28- to 42-inch rows; for good work in any soil condition. ***Fully Adaptable*** with your choice of ten rear rigs for 3-point hitch or rockshaft control. ***All-Around Clearance*** insures good work in tall, bushy or broad-leaf crops. ***Fast, Positive Dodge*** speeds up cultivation, prevents crop loss. ***Special Equipment*** to meet every need.

John Deere Tractor Features:

Custom Powr-Trol provides individual or simultaneous control of right, left, and rear cultivator units. ***Advanced Power Steering*** saves effort every minute at the wheel. ***Roll-O-Matic Front Wheels*** provide surer-footed operation, cut front-end bounce in half. ***High, Centered Seat Location and Tapered Fuel Tank*** give you an unexcelled view ahead and to either side from a natural relaxed position. ***Float-Ride Seat*** absorbs field shocks and greatly increases operator comfort. ***Roomy Platform*** lets you stand at will. ***Hand Clutch*** keeps you in complete control of the tractor while seated or standing.

FARMING...

John Deere

With New Delayed Lift, *you raise both front gangs at the headland while rear rigs finish out the row ends as shown here. This is the new 4-plow "620" Tractor with John Deere Four-Row, Quik-Tatch Cultivator. Note its clean design—there are no push rods to interfere with your view and it's easy to mount the tractor from the front. Effortless power steering, knee-action front wheels, and the most restful, shock-absorbing seat ever put on a tractor are other outstanding features that make better cultivating easier with a John Deere.*

Investigate the liberal John Deere Credit Plan—the easy, convenient means of paying for a new tractor while it earns profits for you.

6 Power Sizes...30 Basic Models

Every One Is NEW...in Looks...in Performance...in Value

"320" SERIES "420" SERIES "520" SERIES "620" SERIES "720" SERIES "920" DIESEL

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Please send free information on the tractors checked below and matching cultivators.

☐ "420" SERIES ☐ "620" SERIES
☐ "520" SERIES ☐ "720" SERIES

Name _____ ☐ STUDENT
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Town _____
State _____

JOHN DEERE

"WHEREVER CROPS GROW, THERE'S A GROWING DEMAND FOR JOHN DEERE FARM EQUIPMENT"

(*Advertisement*)

WHY • WHEN • HOW

you should use

POTASH

Low-cost key to productivity in Midwestern soils

WHY use potash? Very simple: *it pays.*

Potash is the low-cost key which puts meat and milk-building *quality* and *yield* in corn and legumes, scale-bending *weight* in cash grain. Potash enables crops to use moisture better, and even fight off disease better.

With *severely limited* supplies of potash, plants will live, but will develop many of the starvation symptoms shown on the opposite page. With *moderately limited* amounts of potash in your soil, you won't see these warning hunger signs, will never know the size of the crops you *could have* raised.

In short, potash—the *lowest cost* of the major fertilizer elements—contributes to *highest profits.* Not only through greater yields, but also through products of *higher quality,* better market appeal.

If you are following a typical Cornbelt cropping pattern, and a typical Cornbelt fertilizing program, *you are running lower and lower on potash.* Without delay, pull soil samples, have them tested. Potash is low in cost; it will pay you to put on *every pound* the soil tests indicate you need.

WHEN are the best times to use potash? As starter; plow-down; topdressing. But remember this: Cornbelt crops—corn, small grains, forage legumes, soybeans, canning crops and orchards, all need large amounts of potash. Whenever you market a crop, you have sold potash off your farm and, on many soils, need to replace it just as surely as you need to fill the gas tank after a day of heavy plowing.

The single most important point to remember about *when* to apply potash is to apply it *before* a single hunger sign can be seen. When hunger signs show, all you can *hope* to do is *cut your losses.* Apply potash early and amply, and you *build your profits.*

HOW to apply potash? Most potash in the Cornbelt has been put on in the starter fertilizer for corn. Now, we're finding larger and larger amounts pay the best profits, and we are seeing two important changes.

First, top corn growers are using band placement of mixed fertilizer at planting time. Many new corn planters, or conversion kits for old ones, place the fertilizer in a band a couple of inches below and a couple of inches to the side of the seed.

Second, many expert corn growers are broadcasting high-analysis mixed fertilizers, or muriate of potash, on corn ground before plowing.

Use a potash-abundant mixed fertilizer ahead of a legume seeding, as indicated by soil test. And don't forget to topdress later, for, when there is a shortage of potash in the soil, the *legume in a legume-grass mixture will starve first.*

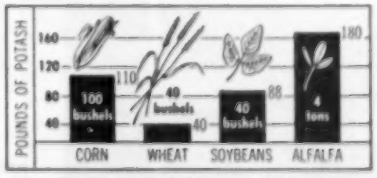
WRITE FOR FREE BOOKLET:
"Potash In Agriculture"

AMERICAN POTASH INSTITUTE, INC.
Dept. 111, 1102 Sixteenth Street, N.W., Washington 6, D.C.

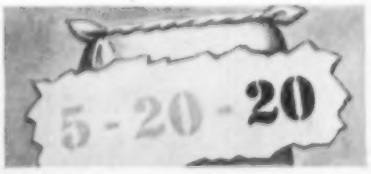
MEMBER COMPANIES: American Potash & Chemical Corporation • Duval Sulphur & Potash Company • Potash Company of America • Southwest Potash Corporation • United States Potash Company Division of United States Borax & Chemical Corporation

2-Minute Short-Course On How to *Buy* Potash . . .

Don't wait for hunger signs. Test soil, find plant food need. Consult your official agricultural adviser.



Cornbelt crops use lots of potash. And the better your yield, the more potash next year's crop needs.



Potash is the "anchor man" in a fertilizer analysis—just as it is in building quality and yield in crops.

And How to *Apply* Potash . . .

In starter keep potash content high as soil test shows need. Band-place below, to one side of seed.

For heavy, most profitable, potash treatment broadcast and plow-down. Be sure to topdress forages.

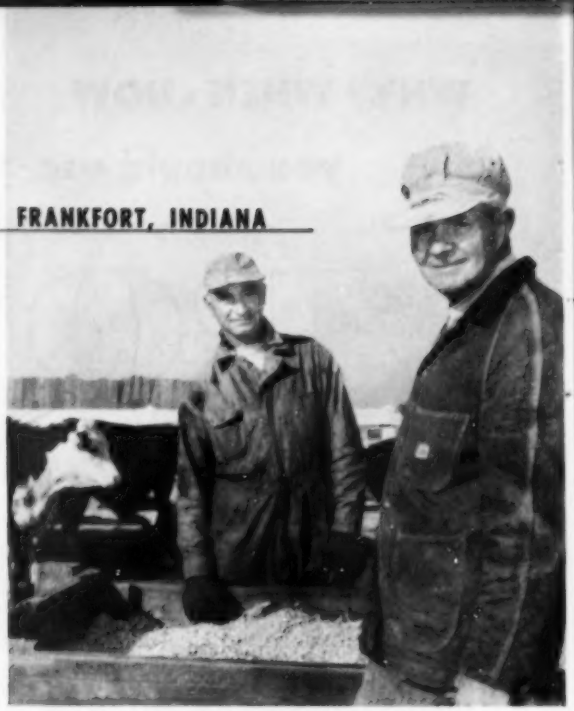
Use potash-rich fertilizer at grain seeding time as shown by soil test. Helps grain, and legume seeding.

FEEDLOT INTERVIEW WITH LOU AND BOB MYERS, FRANKFORT, INDIANA

Pioneered supplements with 'Stilbosol'... "Cattle have done far better than ever before"

'Stilbosol'-fed cattle top market. Myers' 37 head average 2.89 pounds daily gain at feed cost of only 14½¢ per pound... pay weight to pay weight.

by Eugene S. Hahnel



Lou (right) and Bob Myers feed between 350 and 400 cattle, and 1,000 to 1,200 hogs a year. Five drilled wells with pressure water systems furnish plenty of fresh water at all times to every hog and cattle lot.

Lou Myers, who with Mrs. Myers will celebrate a golden wedding anniversary this year, has been farming and feeding cattle "ever since I've been able to carry a bucket," as he puts it. Lou is Bob Myers' father. Together, they operate 440 acres on a 50-50 rental basis with the landowner.

The Myers first fed supplements with 'Stilbosol' in December, 1954 . . . one of the very first in the country. "Yes, we're still using it. We know it has been a big help to our cattle feeding operation, and we feel our cattle have done far better since we've been feeding it than ever before," agree father and son.

Most Myers-fed cattle dress out between 59% and 62%. Myers' final finishing ration includes 10 pounds of shelled corn, 10 pounds of crushed corn-and-cob meal, and 2 pounds of a finishing supplement with 'Stilbosol.'

The Myers' 37 head of market toppers averaged 2.89 pounds daily gain for 91 days on feed. This lot was on an alfalfa-brome-ladino pasture most of the time, which helped make economical gains of 14½¢ per pound.

Experienced as they are, the Myers still like and use the many services offered by their feed company representative, Dale Galloway (left). "We appreciate the helpful advice Dale gives us on feeding and management."

The Myers fed the 37 head a ration of crushed corn-and-cob meal plus supplement with 'Stilbosol' on alfalfa-brome-ladino pasture. To save labor, they use auger-equipped wagons and fill them by gravity flow from a new overhead granary holding 15,000 bushels of ear corn and 8,000 bushels of grain. Scales located directly under the granary weigh grain and supplement automatically.

Stilbosol

(Diethylstilbestrol Premix, Lilly)

'Stilbosol' is Eli Lilly and Company's trademark for Diethylstilbestrol Premix which is manufactured and sold under exclusive license granted by the Iowa State College Research Foundation, Inc., under its U.S. Patent No. 2751303.

ELI LILLY AND COMPANY • AGRICULTURAL PRODUCTS DIVISION • INDIANAPOLIS 6, INDIANA

Nationwide egg checkoff starts in March

From page 51

period, the U.S.D.A. reveals that poultry and eggs were strong favorites for a place in consumer's grocery cart. Per-capita-consumption increases for eggs were 23 percent; fryers and broilers, 104 percent; turkeys, 138 percent; red meat, 28 percent.

To help the poultry and egg industry keep a firm grip on its share of the market, PENB provides more than 30,000 food publicists with poultry and egg information designed to influence the buying habits of the consumer.

Campaigns are staged continuously to call the consumer's attention to new and interesting ways to prepare and serve eggs and poultry meats. The month-long checkoff in March will be coordinated with an "Eat Extra Eggs" campaign—an all-out promotion of eggs carried on locally and nationally.

Thousands of food editors representing magazines, radio and television stations, and newspapers will receive promotional material such as egg recipes newly created and tested in PENB's laboratory kitchen. Mrs. Kathryn B. Niles directs the experimental work which makes PENB releases newsworthy and of service to the reader.

All activity, experimental cookery, promotion, consumer education, research, have a common objective—continued stability in the poultry industry.

The egg checkoff is only one part of an over-all checkoff program embracing all segments of the industry—chicks, feed, equipment, and supplies. The hatchery checkoff on chicks was tried in California, Indiana, Iowa, Kansas, Maine, Minnesota, Oklahoma, and Pennsylvania—and represented a checkoff yield of $24,639. This checkoff was officially endorsed by the American Poultry and Hatchery Federation last July.

Trial checkoffs on feed in a very limited way in Minnesota, South Carolina, and Texas brought encouraging results. The board of directors of the American Feed Manufacturers' Association voted to recommend to AFMA members that support be given to this fund-raising campaign. Should feed manufacturers follow these recommendations and turn over to PENB one cent a ton on all poultry feed, a maximum of $200,000 could be realized from this source alone. Poultry feed accounts for some 60 percent of the feed industry's annual tonnage.

Financial support for the PENB's promotion program in 1956 totaled in excess of $300,000. This was about $50,000 more than was received for the year 1955. The amount collected from the various checkoffs, $42,000, accounted for most of the increase in operating funds. State PENB committees collected more than half of these funds. The Indiana state committee raised $18,552 for PENB during the year and led all the states.

But for details on an organizational setup which may represent a new era in the raising of funds see chart below.

All segments of poultry industry contribute to promotion

Investors	Basis of Investment	Collection Agency	Dates
	EGG PRODUCERS CHECKOFF		
Market egg producers Hatching egg producers	10c per case of all eggs sold for market or hatching during March	Egg buyers, working through PENB state committees, or other state groups designated by PENB	During March
	HATCHERY CHECKOFF		
Hatcheries Chick buyers	2c for each 100 chicks sold	PENB state committees, or state hatchery associations as designated by PENB	Year-round
	FEATHER FUND		
National and regional feed manufacturers, equipment manufacturers, poultry health products manufacturers, poultry processors, and other allied industries and distributors of poultry products	1c per ton of poultry feed manufactured. Between 1/10 and 1/100 of 1% of gross volume of business—depending upon relative rate of capital turn-over and relative margin of profit	The Feather Fund of the United Poultry Industry (19 South 5th Street, St. Charles, Ill.) jointly administered by PENB, NBC, and NTF	Year-round

PAYS OFF AT THE MARKET

Pilot Brand Oyster Shell helps you get top egg production . . . stronger shells . . . less breakage. That means more money for you.

Keep Pilot Brand in the hoppers at all times. This ideal egg-shell material is always dependable. Costs just about a nickel a year per hen.

In the bag with the big blue Pilot Wheel
At most good feed dealers

PILOT BRAND OYSTER SHELL
For Poultry

Oyster Shell Products Corporation
New Rochelle, N. Y. St. Louis 9, Mo.

How to Build Fence, *Successful Farming* 35-mm filmstrip, printed commentary—$3.50.

SAVE BABY PIGS
with the new Caswell All Steel
"FARRO-CRATE"

Reg. U.S. Pat. Off.

Present market conditions indicate that you can make good hog profits in 1957 . . . so make your plans NOW for spring farrowing! For modern farrowing, use Caswell "Farro-Crates" and save one, two or even more pigs per litter.

PREVENTS SOW FROM CRUSHING BABY PIGS
Collapsible, portable and can be hung up or stored outside. Thousands in use. Cheaper and better than lumber! Handles any size sow. Let us help you plan a complete farrowing setup, with connecting panels in your own buildings. No need for wooden pens. Write for FREE PLANNING SERVICE and valuable HOG PROFITS MANUAL.

CASWELL MFG. CO.
DEPT 485 CHEROKEE IOWA

NOW! Baker's Chocolate Chips in the BIG economy package!

It takes a BIG BAKE to satisfy small fry!

It's easier to keep that popular cookie jar filled when you bake up *big batches* with the *big* package of Baker's Semi-Sweet Chocolate Chips! New 12-oz. economy size, at an economy price!

And, when you taste these chips (they make such delightful nibbling, too!) you *know* the cookies you'll make with them will turn out extra delicious! Remember, Baker's Chocolate Chips are made by the makers of famous Baker's Chocolate—best-known, best-loved in baking! So, to make a hit with young and old, get the big 12-oz. bag of Baker's Semi-Sweet Chocolate Chips!

...great for cookies, candy quickies, cake decoration, mixed with ice cream, melted for dessert sauce or frostings!

New recipes on the package

Product of General Foods

Tips for

Ideas that add sparkle and make food

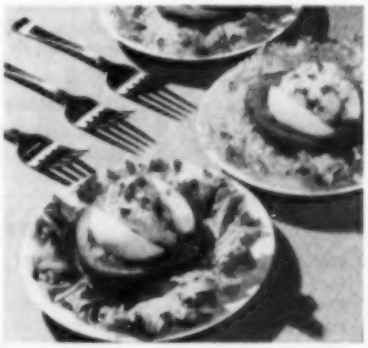
● If you'd like to make popcorn balls for a party and get them ready early, here's a suggestion: Make popcorn balls 2 weeks ahead, wrap, and store in the freezer. They remain crisp and delicious. When ready to use, unwrap balls and thaw at room temperature 2 hours.—*Mrs. James H. Jones, Illinois.*

● For a cheery eye-opening breakfast, serve cranberry sauce with hot pancakes. —*Mrs. Eddie Whalen, Iowa.*

Photographs: Stanley

● Here's a slick trick that helps to shape a graham cracker or vanilla wafer crumb crust: Use an 8-inch pieplate to press the crumb mixture firmly into a 9-inch pieplate. When chilled, the finished crust will be smooth, even and easier to cut without crumbling.—*Mrs. Stanley Hill, Pennsylvania.*

● Deviled egg salad makes a delicious addition to a soup and sandwich lunch or supper. Combine 4 mashed hard-cooked egg yolks with 2 tablespoons each of minced green onion and chopped ripe olives. Add 4 tablespoons mayonnaise



and mix well. Season to taste with salt and pepper. Place thick tomato slices on 4 plates which have been lined with salad greens. Put a spoonful of deviled egg mixture on each tomato slice and arrange sliced hard-cooked egg whites around it. —*Mrs. Richard Jackson, Kansas.*

the cook®

to your meals preparation easier

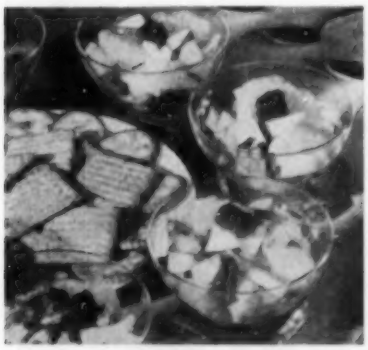
● Want a yummy dessert that's made in a jiffy? Easy Date Pie is the answer. Combine 1 beaten egg, a pinch of salt, 1 tablespoon flour, 1 cup sugar, 1 cup sour cream, and 1 cup chopped dates. Bring to a boil and cook 1 minute; cool. Pour into a baked 8-inch piecrust. Chill and top with spoonfuls of whipped cream.—*Mrs. Ralph Thompson, Washington.*

● Top warm gingerbread with this tasty cream cheese topping. Combine 1 3-ounce package softened cream cheese, 1 tablespoon honey, ¼ cup chopped nuts, and ¼ cup sliced dates. Mix well. Place a generous spoonful of topping on each serving of warm gingerbread.—*Mrs. Jo Hershline, Indiana.*

● Please the whole family with this refreshing dessert. Place slices of unfrosted sponge cake on dessert plates. Top each piece of cake with a heaping scoop of your favorite sherbet. Let sherbet soften for a few minutes. Pile on spoonfuls of sweetened frozen blueberries and serve immediately to an appreciative family.

● Sombrero Scrambled Eggs will make a hit with the children at your house. First brown round slices of minced ham in a small amount of fat. As they heat they will form a cup or hat shape. While minced ham is heating, scramble eggs in your usual way. Fill the minced ham hats with scrambled eggs. Serve hot with chili sauce.—*Mrs. Paul Murdoch, Nebraska.*

● Try this luscious fruit cup for a refreshing dessert: Combine 2 cups fresh orange sections, 1½ cups diced unpeeled apples, ½ cup chopped dates, 2 tablespoons



lemon juice, and 1 cup fresh orange juice. Sweeten to taste with sugar, if desired. Serve chilled with cookies or crackers.—*Mrs. W. Perry, Utah.*

● For crisper French toast, toast bread to a light brown; cool; then dip in egg mixture and fry as usual.—*Mrs. Ethel L. Helander, Washington.*

Mrs. E. F. Dietrich of Huron, South Dakota, took a top award at the South Dakota State Fair with her luscious Banana Bread.

Blue Ribbon Banana Bread

tastes even better with Folger's Coffee

the Mountain-Grown coffee with the rich, distinctive flavor!

For a festive family dessert, or when friends come to call, you'll rate raves with savory slices of Mrs. Dietrich's prize Banana Bread. And you'll find it's even *more* delicious served with steaming cups of richer-tasting Folger's Coffee!

Folger's, you know, is Mountain-Grown coffee — blended in a unique way to bring the naturally richer, more satisfying tang and flavor of nature's choicest coffee to every eating occasion. Little wonder so many folks find greater pleasure in Folger's . . . it's *the* Mountain-Grown coffee!

CUT OUT AND SAVE

FOLGER'S COFFEE . . . IT'S MOUNTAIN-GROWN!
So extra rich in flavor that you are urged to try using ⅓ less than with lesser flavored brands.
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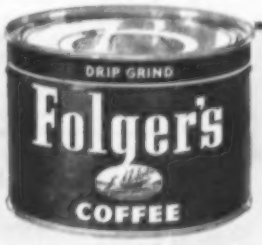
MRS. DIETRICH'S PRIZE-WINNING BANANA BREAD

. . . even better with Folger's Coffee!

1 cup white sugar
¼ cup shortening • 2 eggs
3 tablespoons sour milk
1 teaspoon soda
½ teaspoon salt • 2 cups flour
⅔ cup walnuts • 3 bananas



Cream sugar and shortening. Beat in eggs, mash bananas and add. Add sour milk and soda alternately with flour. Add nuts. Bake at 350° for 1 hour.

KARO PECAN PIE

1/2 recipe pastry
2 eggs, beaten
1 cup KARO® Syrup, Blue Label
*1/8 teaspoon salt
1 teaspoon vanilla
1 cup sugar
2 tablespoons melted butter or margarine
1 cup pecan meats

Roll pastry 1/8 inch thick. Line a 9-inch pie pan. Mix remaining ingredients together, adding pecans last. Pour into pastry shell. Bake in hot oven (400°F.) 15 minutes; reduce heat to moderate (350°F.) and bake 30 to 35 minutes longer or until a silver knife inserted in center of filling comes out clean.

*If salted nuts are used omit salt.

When your recipes call for corn syrup ...that's Karo!

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Use both sides. Double the wear! Each sq. yd. weighs 3¾ lbs.

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CLEVELAND—423 Euclid Ave.
MILWAUKEE 152 W. Wisconsin
MINNEAPOLIS—719 Nicollet
WASHINGTON 1319 F. St. N.W.

OLSON RUG & CARPET CO. *Dept. N-21*
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The Howard Smiths have a small entrance hall in their Stronghurst, Illinois, farm home. But they made it useful by putting up a hanging mirror and shelf. Not only are they decorative, but also serve a definite purpose.

The mirror enables guests to take a quick look as they come or go. The drawers hold gloves, keys, and small items. They take up little room, but keep the hall from looking unfurnished, bare, and unwelcome.

Furnish small areas

There may be corners, alcoves, or other small areas in your farm home that will not only look better but give more use if furnished.

Hallways look bare and uninviting if they don't have a chest, mirror, or bit of furnishings. Here are two ideas to help you obtain better use of small areas by furnishing them.

Photographs: Hedrich-Blessing

A small corner in a hall can be made into a quiet and ideal spot for the telephone by building in small bench with cushion, and a shelf for the telephone. The corner is attractive, useful, and fills up an otherwise empty space in hallway. Try this idea in your home

GOLDEN ROCKET 88 HOLIDAY SEDAN

Come on—live a little!

If you're the kind who won't settle for the ho-hum way of life . . . you're ready to join the circle of Oldsmobile owners. And the Golden Rocket 88 is for you! It's a mood-in-motion . . . with the bright new Accent Stripe, smart as the slap of skis on snow; it's the sweep of clean, low-level body lines. And above all, it's *power personified*—with the thrilling high-compression horsepower of the Rocket T-400.* Dashing "go" when you need it . . . wise economy when you want it! Today, let your Oldsmobile Quality Dealer show *you* the glamorous Golden Rocket 88 . . . value-car of the year!

GOLDEN ROCKET 88

*277-h.p. Rocket T-400 Engine standard on all models; Special Rocket Engine, with up to 312 h.p., available at extra cost.

OLDSMOBILE

Now! The loveliest wave in takes ½ the time,

—and the reason is

Only New QUICK by Richard Hudnut has this Crystal Clear penetrating lotion. And it's lanolized!

Quicker, gentler penetration! New Quick Home Permanent's Crystal Clear Lotion has none of the cloudy, sticky ingredients that hinder penetration and slow down waving action in ordinary permanents. So it penetrates *all through* your hair more quickly, yet gently. Gives you the surest, safest wave ever.

Lanolin-care for your hair! New Crystal Clear Lotion is lanolized to give you smoother, springier curls with a healthy shine. Lanolin-soft Quick curls never have that frizzy "new perm" look, even the first day. And yet they won't go limp in dampness or humidity. Last beautifully till you cut them off.

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the world ½ the work

crystal clear!

½ the time—½ the work! New Crystal Clear Lotion's fast penetrating action lets you roll more hair on each curler and still get a firm, lasting curl to the very tips of your hair. So just 20 curlers—½ the winding time—½ the waving work—give you a complete, full-bodied new-style wave.

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2-wave size, $2.00 plus tax
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New Home Permanent by Richard Hudnut

Penta-treated poles and posts save you money because they last longer

POLES
for buildings

Willis C. Roberts, Tecumseh, Nebraska, owns this 31 x 65 foot cattle shed and a 52 x 36 foot machine shed, both built on Penta-treated poles. Barns, corn cribs, bunker silos and other farm structures can be built on poles for a fraction of conventional construction cost. Poles serve as foundation, studding and roof support, all in one . . . Penta leaves poles clean and easy to handle. Plans for low-cost pole buildings are widely available.

POSTS
for fencing

Jack Lionberger used Penta pressure-treated* posts and boards to build this fence on his farm near Colusa, Illinois. Penta keeps rot and termites out—makes posts last much longer, leaves them clean and easy to handle. Dollar for dollar, Penta is your best buy because every Penta pressure-treated post you install today will eliminate a replacement problem tomorrow.

**For your protection, buy from your local dealer who handles posts and poles that meet U. S. Government Specification TT-W-571.*

Dow presents The Red Foley Show on Saturdays. Check radio listings for time and station.

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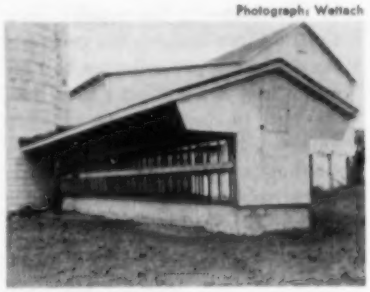
☐ Information on low-cost PENTA-treated pole buildings.
☐ I am interested in pole-type buildings for _____

YOU CAN DEPEND ON DOW

Two-way feed bunk

A handy 40-foot cattle rack and feed bunk are used on the Wallace McKensie farm, Portage County, Ohio. Feeder attaches to silo chute and barn for easy silage and hay feeding. Bin on one end holds grain and supplement and is filled from wagon or mill. Sloping door on bin makes it easier to get feed out. The arrangement reduces the time and labor needed in McKensie's feeding operations.

Photograph: Wettach



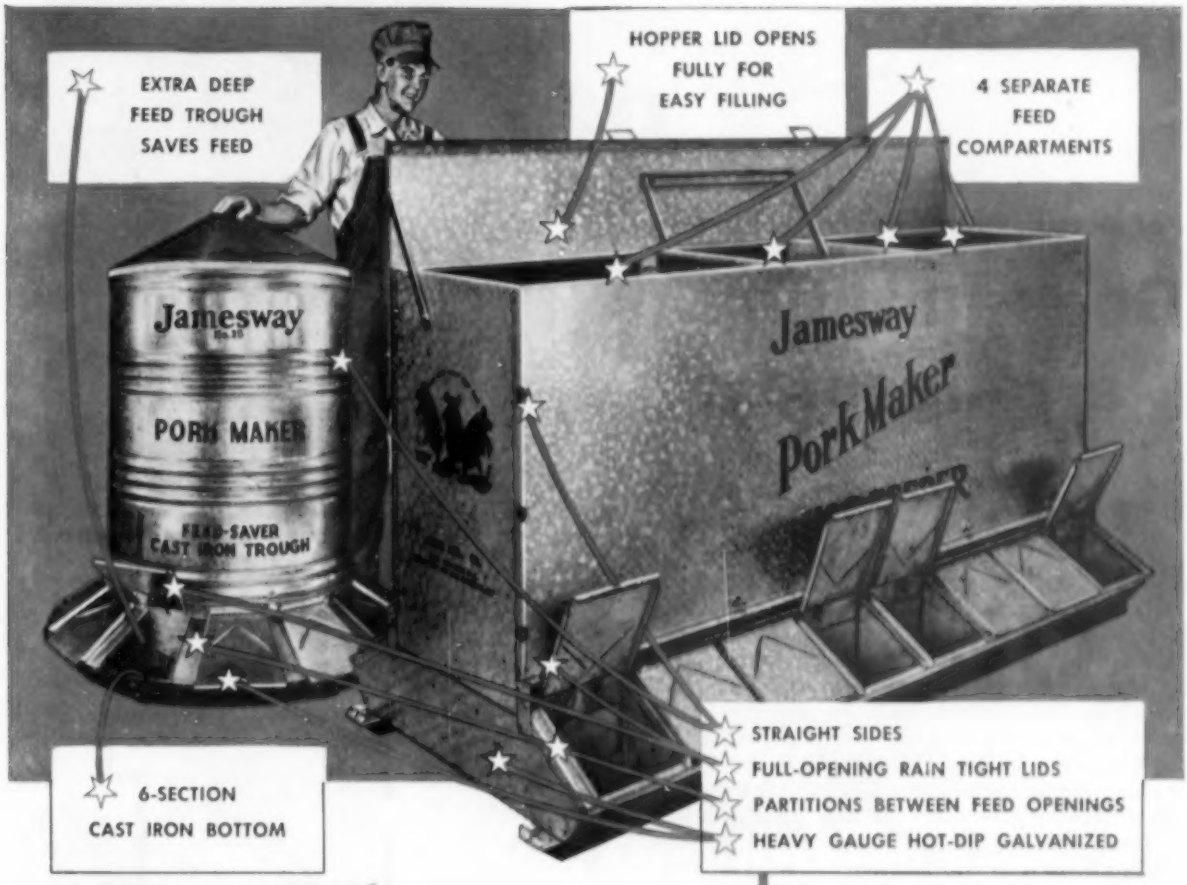
Bunk has block foundation; sides are 5' long pipes, 14" apart and welded to angle iron rail at the top. The roof overhangs 5'

Raised center walk is 3' side, with 2' manger at sides. Steel I-beams hold the roof

Treated seed gets new color

Michigan farmers have a new law that regulates their handling of seed from small grains, corn, peas, or beans. It requires them to dye the treated seed in contrasting color.

Reason behind this legislative move is to prevent the accidental mixing of treated seed with food grains, or with grains slated for either animal or human consumption. The law allows no mercury compounds in food.



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Take your pick of 2-, 6-, 10- and 16-door box feeders; 12-door round and 6-bushel rotary feeders. Pork-Makers all. Profit-makers too! See them now at your Jamesway dealer's. Or write JAMES MFG. CO., Dept. SF-37, c/o your nearest division office. Fort Atkinson, Wis.; Lancaster, Pa.; Los Angeles 63, Calif.

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Self-feed dry pig starter to 12 pigs with this inexpensive Jamesway creep feeder. Has 30-lb. feed capacity . . . adjustable slide to regulate feed flow . . . hinged cover for easy filling. Gets pigs started on dry feeds sooner.

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For more comfortable living, have

Good furniture arrangement

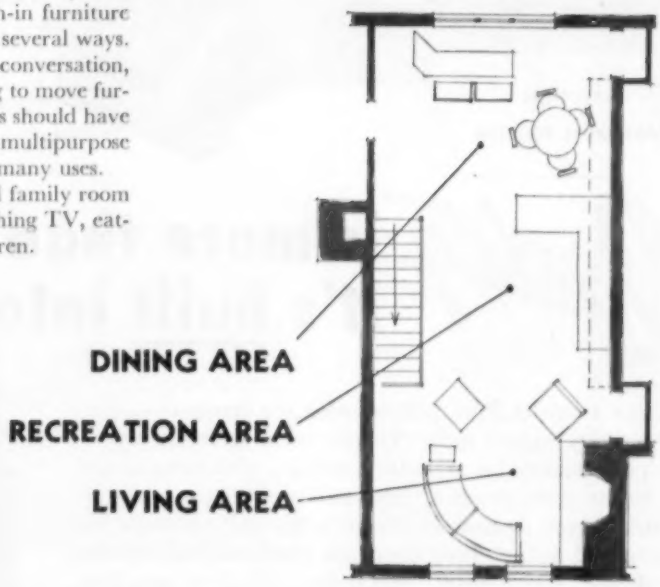
By Betty Fisk

Dining and serving area at end of basement family room offers room to seat 4 at table, or several at counter bar for cool refreshments. Cabinets above hold dishes and glasses. This arrangement is convenient for entertaining, as it is close to stairs and handy for bringing food from kitchen, and taking dishes upstairs for washing after meal is over

Furniture arrangement can make or break a room. The best of furnishings can look jumbled, out of scale, and not right unless arranged to fit the room, the family, and their activities. That's why it is so important to plan first, working out an arrangement on paper to be sure you're getting the most out of a room. Try sketch-in furniture on a room plan to see if it can be arranged several ways.

Chairs and sofas should be arranged for conversation, reading, watching television without having to move furniture when friends arrive. Children's rooms should have an area for study and play. If you have a multipurpose room, arrange in groupings to serve those many uses.

Here's a good example of a well-planned family room in a basement—arranged for visiting, watching TV, eating, and entertaining by grownups or children.



Recreation area houses television, record-player—all built in to save space, give better viewing, and to divide area. Overhead cabinets store records and music. Counter can be used for buffet or snacks. Floor is hard surface for dancing or children's play and is easy to care for

Photographs: Suter, Hedrich-Blessing Data: Ruth W. Lee

Living area utilizes curved sofa for more seating, with matching chairs and stools. They're covered in plastic with iron legs and trim for minimum of upkeep, but maximum wear. Arranged for watching TV in center of room, or around the fireplace for visiting on cool nights

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7 LBS. FUL-O-PEP . . . You buy only 2 lbs. Chick Starter – 5 lbs. Growing Mash, per bird on range, on the Ful-O-Pep Restricted Feeding Plan. Saves up to 14 pounds total feed, per bird, over forced feeding plans.

SAVE $400 . . . You save about 40¢ per bird – $400 per 1000 birds – by following the famous Ful-O-Pep Restricted Feeding Plan. It's *easy to follow* . . . grows big, productive pullets.

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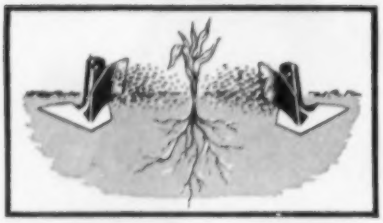

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How to over-roof with wood shingles

By Robert F. Myers

Over-roofing farm buildings with cedar shingles is an excellent way to achieve maximum protection with a minimum of maintenance. The resulting double roof also gives you valuable insulation.

The economical grade of cedar shingle to use for such work around the farm is the No. 3 Black Label. Properly applied, the No. 3 will give a long-lived, serviceable roof equal to any more expensive roof covering. Also, building contents are protected since the new roof is applied over the old. You avoid job of picking up old shingles.

Depending upon the roof pitch, different exposures of the new shingles are possible. If the roof pitch is 5″ in 12″ (rises 5″ for every 12″ horizontally), and the shingles are 16″ Black Labels, a maximum 5″ exposure is allowable.

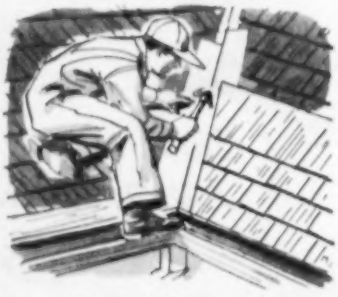
For 18″ Black Labels on such roofs, a maximum of 5½″ may be exposed.

1. In roofing-over with wood shingles, first job is to take off first course of old shingles around edge of roof. Cut away 4″ at eaves

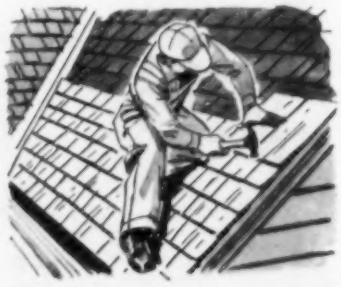
2. Then cut away about 4″ from the edges of the roof gable ends. You do this to replace weathered shingles with new wooden strip

3. Now nail strips of wood, 1x4s should fit space perfectly, in the space cut out. They provide strong nailing base for new shingles

4. Remove old ridge shingles in same manner but replace them with piece of cedar bevel siding. Be certain to put thin edge down



5. Place strips of wood on top of old valley flashings to keep new flashing from contacting old. Nail on new flashing, start shingling



6. New shingles can be put over old. You'll need to use longer nails to go through both layers. Be sure they're rust-resistant type

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NEW LOW LOOK!

new Massey-Harris Harvest Streamliners deliver bonus bushels in every crop

Here's combine styling, capacity, and ease of handling that picks up where yesterday's best left off. You see it in the new, lower silhouette — almost a yardstick lower — in the lower grain tank, lower air intake, fold-away auger!

This lower design assures stability and safety never before equalled . . . and with no sacrifice of ground clearance. And on the inside, exclusive Balanced Separation — the perfect coordination of extra-wide cylinder, extra-long walkers, exclusive Dyna-Air chaffer — delivers bonus-bushels from every acre.

What's more, you'll find driving these giants is like handling your car . . . with Power Steering, Power Header control at finger-tip command.

See the miracle 82 with 14, 12, or 10 foot cut . . . and the mighty 92 with 16, 14, or 12 foot cutter-bar at your M-H dealers now.

TOPS IN CORN TOO!

Switch from grain or beans to corn, in a jiffy, with the quick-change corn head. Combine corn in almost any weather. Pick and shell in one trip with an 82 or 92 Harvest Streamliner.

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You name the time. Your Massey-Harris dealer will be proud to have you work-test a new Harvest Streamliner. For free folder write: Massey-Harris, Racine, Wisconsin, Dept. C-110

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ROLFES GRAIN AERATION COMPANIES
BOONE, IOWA

Multiple farrowing for $3,800

From page 57

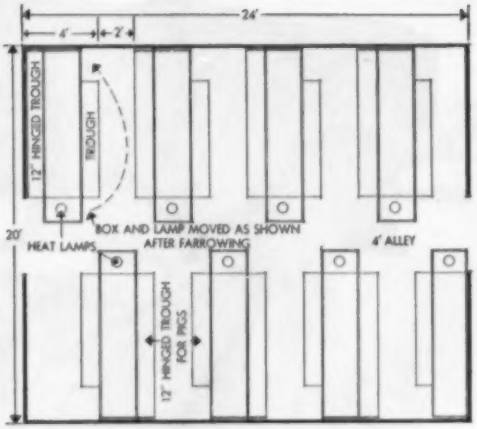
With these buildings, Jim McCutchan, Russellville, Indiana, is farrowing 15 to 20 sows monthly to produce 2,000 pigs yearly

He credits crates for saving 9 out of 10 pigs farrowed

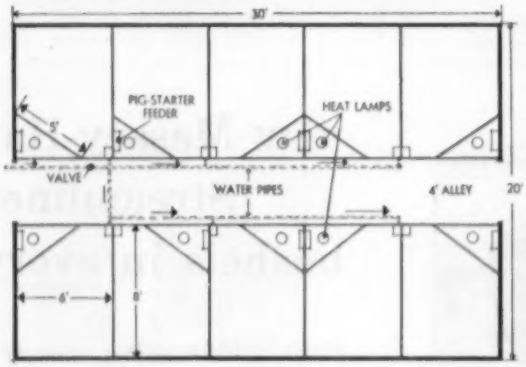
The farrowing crates kept mashing to minimum. McCutchan's accurate records show that the sows killed only 5 out of 1,400 pigs by stepping or lying on them.

This building is well insulated and equipped with stove and heat lamps. Heat lamp is suspended over farrowing box during farrowing, then moved to the side of crate with box when pigs are shifted to the sow's side for suckling.

The hinged platform on each side of the crate gives the pigs freedom of movement.



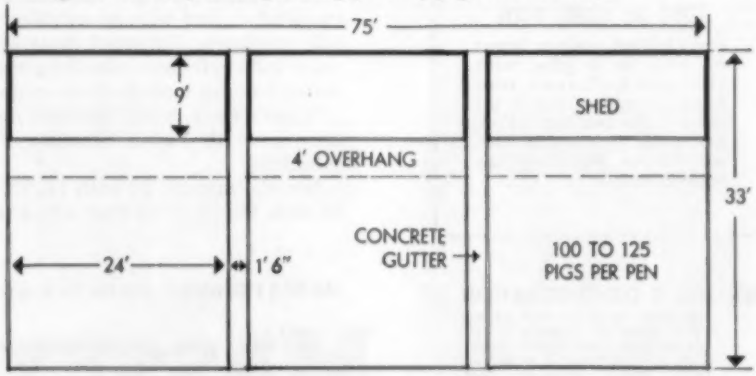
Pigs remain in growing houses until 7 weeks of age



Sows are shifted to one of two growing houses and placed in a 6'x8' pen after 3 to 5 days in farrowing crate. Each pen is equipped with heat lamps and feed creep for pigs, automatic waterer for sows.

Plumbing is permanently installed. A plastic hose connects water pipes to the hydrant. When the pigs are weaned and sow moved out, alternate partitions are removed, forming 4 large pens and 2 small ones.

During 50- to 75-pound growing period, pigs are in sheds



Growing sheds on 75'x33' concrete platform provide shelter for pigs during 50- to 75-pound growing period. During warm weather sheds are open on the east. During adverse weather, he uses an 18'x5'6" panel on front of shed to serve as a windbreak. Sheds can be pulled together making an enclosed building 24'x26'. Each pen contains 4 feeders and 2 waterers

Accurate records...

save time for your veterinarian, save money for you

When your veterinarian examines your herd, he's looking for trouble. That's part of his job of Animal Health Engineering: to recognize symptoms of injury or disease while still in the early stages—to make careful diagnosis—to start treatment fast—to keep every one of your animals producing at maximum profit. Here's how you, *and only you,* can help.

Keep accurate records! Save time for your veterinarian, help him save money for you. Always be ready with accurate, up-to-date records for every member of your herd. Make each "case history" as complete as you can, including: date in heat, date bred, date due to calve, date calf dropped, records of milk production and feed consumption. If animals have been treated for injury or disease, write it down! Your veterinarian can help you *faster* when he has *all the facts!*

New drugs—modern miracles of Animal Health Engineering. Every time your veterinarian calls, all the skills of modern veterinary science come with him. He brings to your barn an intimate knowledge of the newest and most effective drugs which have saved countless numbers of America's valuable livestock. Many of these new drugs are products of the Squibb Research Program, and Squibb is proud of its part in the development of these modern miracles of Animal Health Engineering. As with all Squibb products, SQUIBB QUALITY IS THE PRICELESS INGREDIENT.

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McCormick® Farm Equipment and Farmall® Tractors

A breeding harness is attached to ram's brisket. Different color is used each week. Crayon marks ewes that are bred. Record is kept of the lambing date. During lambing season, the ewe is penned separately before her lamb is dropped

SHEEP —his top moneymaker

By Jack Everly

Converting surplus alfalfa-brome pasture into tons of fat lamb is a highly profitable enterprise on the fertile prairie farm of Henry Barschdorf, Jr. near Ransom, Illinois.

For the past 2 years sheep have surpassed other classes of livestock in turning feed into dollars on the 240-acre Barschdorf farm. They returned $225 for every $100 worth of feed and pasture, according to the 1955 Farm Bureau Farm Management records. Hogs returned only $126 while cattle was $88 and chickens $140.

The secret—the ewes and their lambs chew their way through mountains of surplus roughage and consume very little of price-supported grains. They never see a kernel of corn—yet lambs hit the high June market and topped it two out of three times last year.

Barschdorf is typical of the Cornbelt farmers who in just the past several years have found that sheep can be moneymakers on high-priced land using the proper management system. In many cases the returns have doubled or tripled other livestock.

From the 10 acres of surplus alfalfa-brome grazed by the flock, Barschdorf's sheep gave a return of $212.60 per acre.

Portable chute-scale combination is placed behind truck parked at barn door. Each lamb is first sorted by sight. They also must pass weight-and-feel test before marketing

The first prerequisite for making money with sheep is to like them, believes Barschdorf. Like most Cornbelt farmers Henry couldn't be classed as a "sheep lover" until 4 years ago when his son Duane brought home 20 Western ewes for a 4-H Club project. These first sheep to set foot on the Barschdorf farm made money—so dad and son formed a partnership and enlarged their flock. This year they will have 125 head utilizing 25 acres of pasture.

They select young Western ewes that look like they will shear well and then mate them to purebred Suffolk rams. They are careful in ram selection and pay more than the usual price to get what they want. "A good ram means more to profitable production than a good bull or boar, so we just can't afford to have a poor one," contends Henry.

Early breeding is part of the secret to getting fat lambs on the June market, reports Barschdorf. They start getting the flock ready in late July or early August by worming. Ewes are clipped around the tail dock.

Both ewes and rams are flushed so breeding is earlier with a higher conception rate for uniform lambing. With newly purchased ewes with average or below fleshing, just turning them on the luxuriant alfalfa-brome pasture provides the necessary flushing action.

Ewes retained from year to year in the Barschdorf flock normally get too fat for early breeding on the alfalfa-brome, so are put in dry lot for 2 weeks with limited ration. When returned to fresh pasture, normally 50 percent are bred within the first week and another 30 percent the second week. To get added flushing action, ¼ pound of oats per day per ewe is fed for 3 to 4 days.

During breeding season the rams get ½ pound of oats per head per day. This improves conception rate and the possibility of twins, believes Barschdorf.

[*Turn to page 116*

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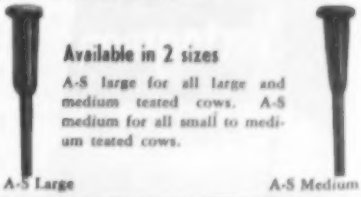

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No. of cows milked.....

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ARMOUR FERTILIZER WORKS

Sheep—top moneymaker

From page 115

By using a breeding harness on each ram, the approximate breeding day of each ewe is known so during lambing season she can be penned separately just before the lamb is dropped. A different color of marking crayon is attached to the breeding harness each week. The ewes marked by the crayon are given a brand with washable paint. The shape of the brand changes each week and this change is noted in a record book. At lambing time those ewes carrying the brand that should lamb during the week are watched with extreme care.

All ewes are penned separate from the main flock to have their lambs in a warm converted horse barn. The only equipment used is a light, hinged gate that pens the ewe against the side of the barn.

During the lambing season the barn is visited several times during the day plus at least three times during the night. This extra attention pays, Barschdorf says.

Ewes start to get ¼ pound of oats 2 weeks before lambing. This is increased to ½ pound per day after lambing until they go on pasture. "This extra feed is perhaps the reason why I have had no trouble with lambing sickness or ketosis," believes Barschdorf.

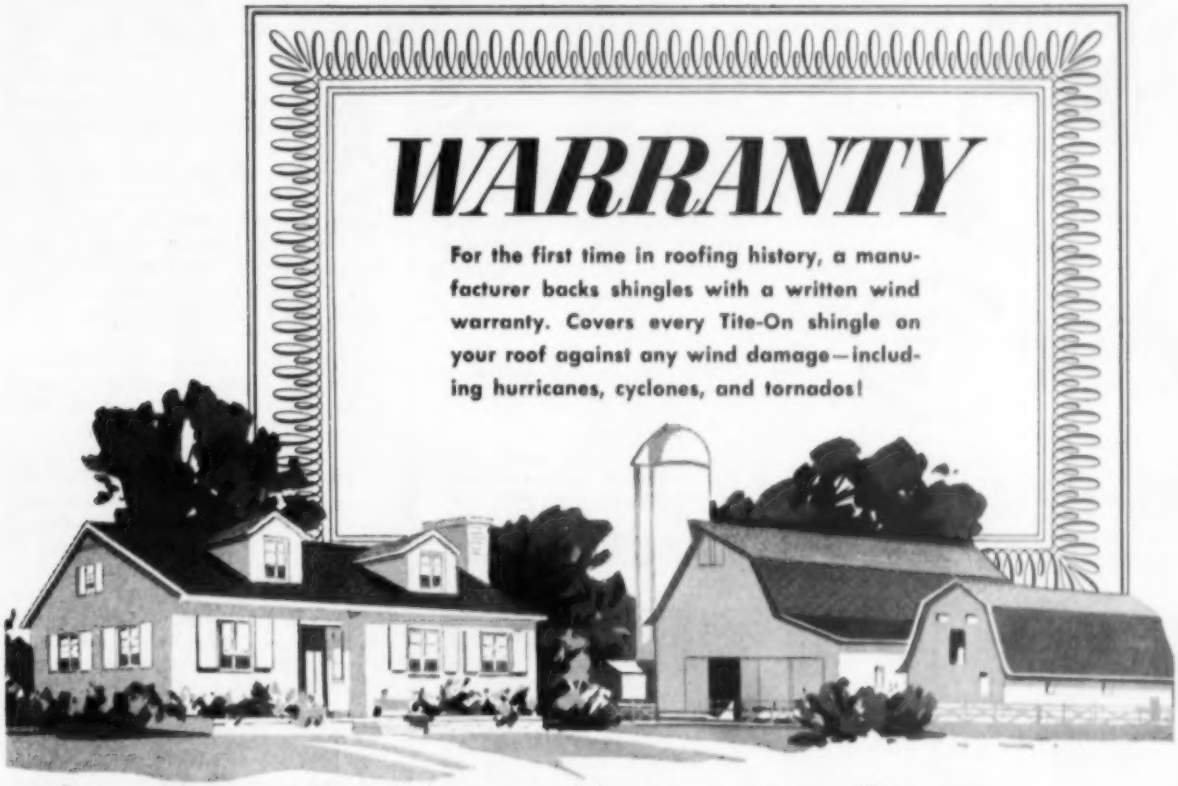
Lambs are creep-fed all of the whole oats and choice alfalfa hay they can eat until pasture. They are docked and castrated with rubber bands.

The entire flock is moved to pasture and doesn't get any more grain just as soon as the alfalfa-brome will stand up under grazing. This is usually late April or early May.

Fat lambs are taken directly from the ewe early in the morning and are sold on the market 3 to 4 hours later. Because custom livestock haulers wouldn't come for the lambs just a few hours before the market opens, the Barschdorfs ship their own lambs by double-decking them in the farm pickup. This saves a 50-cent hauling charge and a 5-pound shrinkage per lamb, which means a savings of $45 per load of heavy, fat, lambs.

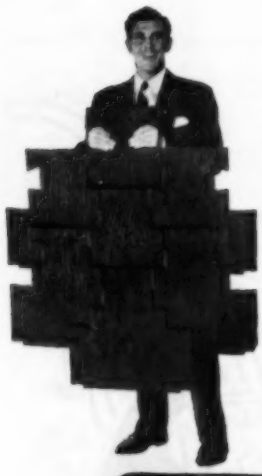
"To be absolutely fair about it, I think you should give the cow's side of it, too."

RUBEROID TITE-ON ROOFS NOW WARRANTED AGAINST WIND DAMAGE



Tite-Ons Hold on Home or Barn

...Even in Hurricanes



Protection *in writing* for the roof on your home or service buildings! Unique interlock design of Ruberoid Tite-On shingles gives windproof safety even in hurricanes, cyclones, tornados! Reason: every Tite-On shingle locks not only to your roof itself but also to other shingles around it. The result is a "one-piece" roof that has withstood the worst hurricanes of the last 20 years on thousands of farm buildings.

Here's how Ruberoid's "one-piece" Tite-On roof locks together. Each shingle is nailed individually to your roof itself – and also locked to the shingles around it. Backed by Ruberoid's written warranty, Tite-Ons mean extra protection for your family in your home, extra protection for your investment in your barns and outbuildings. Ask about them today.

Tite-Ons give you beauty and long roof life, too. Design provides a striking basket-weave pattern, in a range of handsome, modern colors to harmonize with any color scheme. Tite-Ons mean extra seasons of protection for your roofing dollar. Ask your Ruberoid dealer or roofer today about Tite-Ons with the written Wind Warranty.

The Ruberoid Co.,
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The RUBEROID Co.

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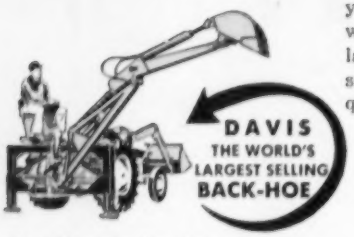
DISCOVER DAVIS

your most economical loader in the long run

With the Davis Loader you *are* money ahead because it is built better to last *years* longer and to do *more* than ordinary loaders. The Davis has numerous attachments such as manure fork, crane, push-off sweeprake stacker, lift fork, dozer, and a variety of buckets for special jobs that really make it a year-around tool. Look at its design – so widely copied by others. Compare its long-lasting features. Profit by its performance as so many others do. Choose Davis... America's quality loader.



It's the largest selling because it has the most popular features, 7,000 pounds of breakaway power, right-angle operation, rotary seat. Ideal for farm and custom work; road and canal maintenance. Priced lower than ordinary back-hoes.

Davis Products are sold and serviced everywhere by better dealers throughout U. S. and Canada.

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CLEAN, FIRE-RESISTANT cow barn interior at the Central Farm, Dept. of Mental Hygiene, Clarksville, Md., has ceiling lined with APAC Sheets. It is roofed with K&M Asbestos-Cement #4 Surf Green Roofing Shingles.

K&M APAC Asbestos-Cement Sheets

Put 'em up once and stop worrying about fire-protection for farm buildings. K&M APAC Sheets can be easily cleaned, and painting to preserve them is unnecessary (though they do take paint beautifully if you ever want to change from their pleasant gray color). They're large and easy to apply. Made of mineral asbestos and portland cement, two of Nature's most durable materials, they're also immune to vermin attack. Use APAC Sheets indoors or out, on all farm buildings, for modern protection that lasts for good!

ASK YOUR BUILDING MATERIALS DEALER ABOUT K & M APAC SHEETS, OR WRITE FOR INFORMATION.

KEASBEY & MATTISON
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Results of post treatment tests

What's the life of fence posts treated on the farm with pentachlorophenol? Some striking answers are coming out of University of Minnesota foresters' long-time study of a simple, low-cost preservative treatment used on farms.

In the tests, underway for 13 years, peeled and seasoned fence posts were treated in a 5-percent oil solution of pentachlorophenol by cold-soaking them upright in open oil drums, from 1 to 2 days.

Posts of jack pine, black ash, paper birch, cottonwood, aspen, red oak, and white oak were tested.

Jack pine, black ash, and paper birch respond best to the cold-soaking treatment—100 percent of the treated jack pine posts were still strong at the end of 13 years.

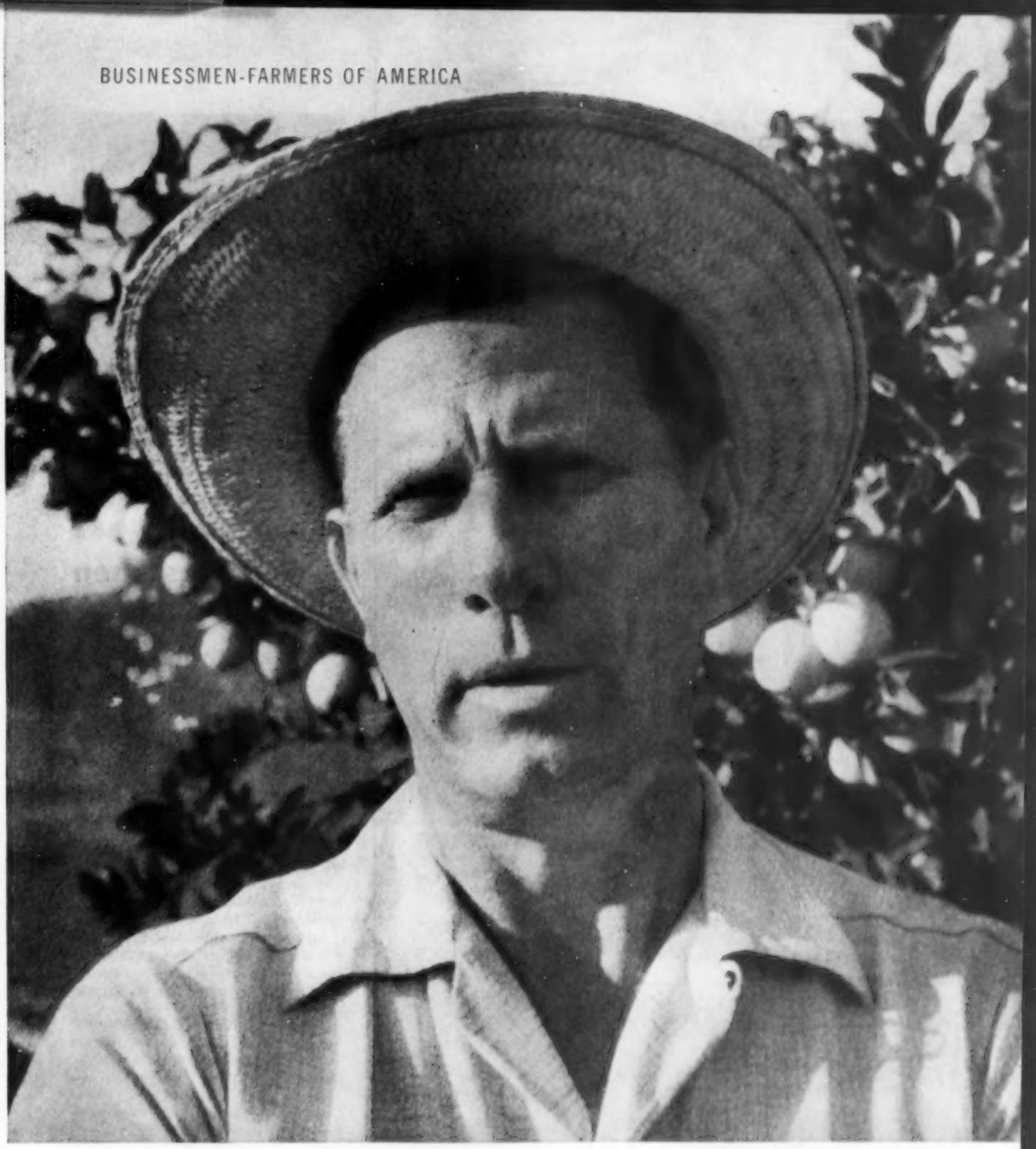
Aspen and cottonwood are difficult to treat, but treating results in at least a 400-percent increase in service life. Red and white oak are naturally durable and the increase in service life may not be enough to make treatment pay, say the foresters. Forty percent of the untreated red oak and 50 percent of the untreated white oak posts were satisfactory after 13 years.

But at the end of the 13 years, only 6 percent of the untreated jack pine posts and none of the black ash, aspen, cottonwood and paper birch posts were serviceable—the latter had failed at 10 years or earlier.

Average life of the short-lived untreated posts was: 4.5 years for black ash and 4 years for such trees as paper birch, aspen, and cottonwood.

A bulletin giving complete directions for treating fence posts by this method can be obtained by writing to the University of Minnesota Agricultural Extension Service.

"There's nothing wrong with it that a couple of fifty-dollar bills won't fix."



"I'm Louis J. Stenger. Been growing citrus fruit down here in Bartow, Florida, about 25 years now. Got 160 acres of groves, oranges and grapefruit. Things will always be all right for my wife and two girls if anything happens to me. Took out life insurance that will look after them. Sure glad I saw the Man from Equitable."

The Equitable, through its loans, has a $353,000,000 investment in the future of farming.

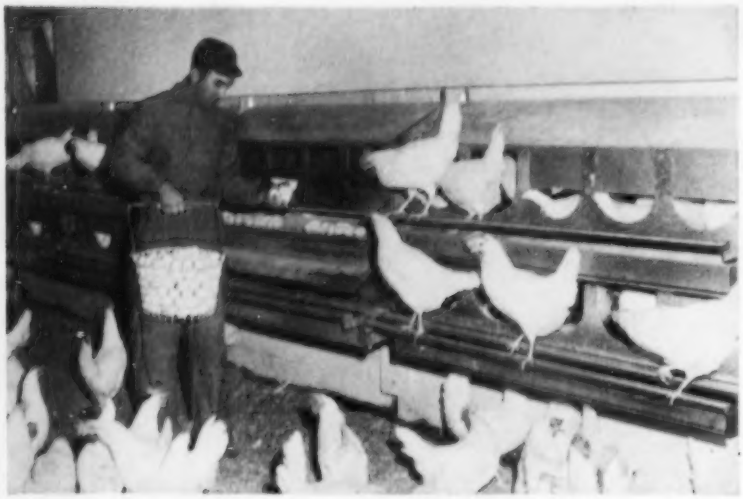
Living Insurance by Equitable

THE EQUITABLE LIFE ASSURANCE SOCIETY OF THE U. S., 393 SEVENTH AVE., NEW YORK 1, N. Y.

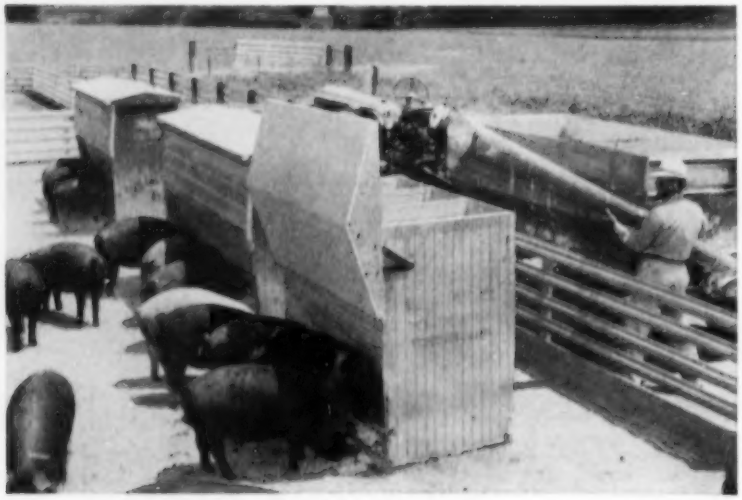
Abbott

Arsanilic Acid

makes the profit difference!



In Egg Production 2 to 10% more eggs, on .3 to 1.6 lbs. less feed per dozen eggs! That's the record of Arsanilic Acid when added to top-notch feeds. At a fraction of the cost, Arsanilic Acid fights sub-clinical diseases much like antibiotics—yet, improves the performance of feeds already fortified with antibiotics. For a profit, after you pay the bill, use egg feeds fortified with Arsanilic Acid!



In Hog Production *At a fraction of the cost,* Arsanilic Acid fights diseases much like antibiotics. Reduces antibiotic requirements, yet gives superior performance in the feed-lot. Cuts feed bills. Pigs grow faster. There are fewer runts, greater uniformity. Combines with antibiotics for the safest, surest protection against scours. For a real *profit difference*, use feeds and concentrates containing Arsanilic Acid!

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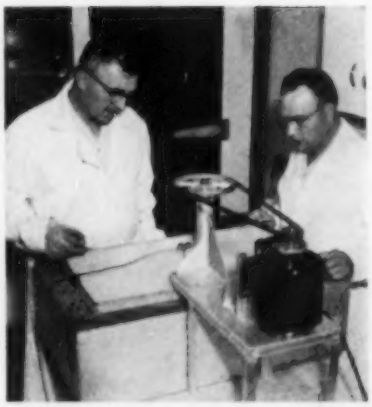
Abbott **Abbott Laboratories, Chemical Sales Division**
North Chicago, Illinois



Philo Tabor (left), manager of Northwest Iowa Federated Breeders Cooperative, Sheldon, Iowa, and Russell Blake, assistant manager, freeze semen through use of dry ice

Iowa stud shifts to

Frozen semen

The Northwest Iowa Federated Breeders Cooperative, Sheldon, Iowa, is now operated on a 100-percent frozen semen basis. It is one of the first breeding organizations in the nation to shift completely away from liquid semen.

Philo C. Tabor, manager, reports that the changeover took more than a year to complete. "We needed to give personal supervision to the technician while he was learning to use frozen semen. Also, we had to perfect our technique to ensure quality and to keep operating costs to a minimum. Most of the freezing equipment we made ourselves to fit our particular needs," he says.

Semen-storage equipment at the stud cost about $7,000 and sealing equipment cost about another $500. County storage units located throughout the service area cost about $475 each.

Tabor cites these advantages for the livestock breeder: better sire selection for a specific need such as improving udders, backs, legs, or dairy character; an opportunity to breed uniformity into a herd by being able to use a specific sire or blood line as much as desired.

The technician also enjoys an advantage. During bad weather or icy road conditions, semen need be delivered only once in 2 to 3 weeks. The technicians can begin their calls early in the morning if they need to. In some cases with liquid semen, the shipment didn't arrive until late in the morning, causing a delay and occasionally encouraged the use of questionable semen.

Since the breeding organization has switched to frozen semen, the conception rate has risen slightly. Tabor contributes part of this good record to the fact that dry ice is readily available.

New capacity!

The completely new Forward Control 'Jeep' FC-150—the first time a 4-wheel-drive Truck has so effectively combined maximum cargo capacity with exceptional maneuverability! New Forward Control design puts a 74" pickup box on an 81" wheelbase. And the FC-150 retains famous 'Jeep' ruggedness and versatility.

New maneuverability!

It's the world's shortest turning 4-wheel-drive Truck! For safer off-road maneuverability, it gives you up to 200% greater forward visibility. Powered by the engine that made 'Jeep' vehicles famous, the new FC-150 provides the extra traction of 4-wheel drive for off-road travel, shifts into 2-wheel drive for highway travel.

New style!

The new look and feel of tomorrow! The FC-150's Safety-View Cab combines beauty with utility. Its new wrap-around windshield is the largest in the 5,000 GVW class. There's plenty of extra leg and head room. Here is new styling, comfort, convenience and safety all in today's most advanced 4-wheel-drive Truck.

New 'Jeep' Forward Control 4-Wheel-Drive FC-150

Willys... world's largest makers of 4-Wheel-Drive vehicles

...other members of the famous 'Jeep' family:

Universal 'Jeep'

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See 'Jeep' vehicles at your WILLYS dealer

THE CANADIAN ROCKIES present you with scenes of unexcelled grandeur. On the Banff-Lake Louise Route, you travel through

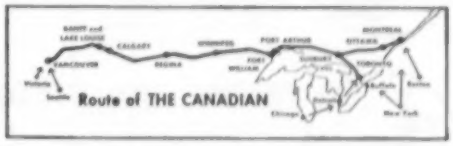
You'll see more of magnificent Canada from the Scenic

MAGNIFICENT BANFF SPRINGS HOTEL nestles mile-high in the awe-inspiring Canadian Rockies. This world-famous resort area is just as well known for its hospitality as for its golf, riding, swimming and invigorating mountain sport activities. And it's right along the route of *The Canadian*.

LOVELY LAKE LOUISE makes an unforgettable stopover. It's perfect for boating, swimming, hiking...or just enjoying the scenery. Like Banff Springs, only forty miles away, Chateau Lake Louise is a luxury hotel where every thought is devoted to your pleasure.

them in broad daylight, when you can take full advantage of the view from the sky-high Scenic Domes of *The Canadian.*

Domes of The Canadian



Canada's only stainless steel streamliner takes you along the Banff-Lake Louise Route through 2,881 miles of ever-changing scenery.

The moment that you step aboard *The Canadian,* you'll be entering a new vacation world.

First, perhaps, you'll relax in your comfortable armchair, while scenes of majestic beauty flash by. Then you might stroll to the intimate Mural Lounge for refreshments. As evening approaches, you can enjoy an inexpensive meal in the Skyline Coffee Shop, or make reservations for the finest Canadian cuisine in the Deluxe Dining Room Car.

The Canadian is justly famous for its atmosphere of spacious comfort and ultra-modern luxury. Whether you go coach, tourist, or first class, every seat on the train is reserved at no extra fare. In daily service throughout the year between Montreal and Vancouver and Toronto and Vancouver, *The Canadian* offers the longest scenic dome ride in the world, under smooth diesel power.

To be sure of the accommodations you want *when* you want them, make reservations now. Get complete details from your travel agent or Canadian Pacific in principal cities in the U.S. and Canada.

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Dependable running water in the barn and in the home is a *must* for modern farm living. That's why it pays to choose a Goulds Water System—to get the performance and dependability assured by more than a century of pump leadership. Your farm deserves the finest—and since Goulds Water Systems cost no more than ordinary pumps — why settle for less? See your nearby Goulds Dealer soon—he has the pumps and the experience to handle *any* farm water problem...

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NEW Goulds Packaged Jets
Complete pump-and-tank systems that give you famous Goulds quality at surprisingly low cost! **Shallow-Flow** (for shallow wells) capacities to 1050 G.P.H. **Prime-Flow** (for deep wells) capacities to 890 G.P.H. Both systems available in ½ and ½ H.P. sizes on 12 or 30 gal. tanks. Self-priming . . . corrosion-resistant . . . easy to install!

NEW Goulds Jet-O-Matic
The last word in *convertible* systems—completely packaged for either shallow or deep well installation. Easily converted if water level changes. In 5 sizes—up to 1½ H.P.—with capacity range to 1570 gallons per hour. Has all famous Jet-O-Matic advantages — at a new low price!

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Tells how to choose the proper water system for home and farm. Fully illustrated — easy to understand.

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Please send free pump booklet and name of nearest distributor.

Name .....

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For teen-age cooks

Cook a spaghetti supper

Photograph: Hopkins

Serve plump golden-brown meat balls cooked in spicy tomato sauce atop a platter of piping-hot spaghetti. Your family is sure to vote you the "best cook in the county"

Next time you're chief cook at suppertime, let Charlotte Jean Pfettscher from Indiana help you out with her favorite recipe. Seventeen-year-old Charlotte's Meat Balls 'n Spaghetti make as tasty a main dish as any cook could wish for.

If you've wondered, here's the correct way to eat spaghetti: holding a fork in your right hand spear several pieces. Rest fork tines against the plate and twist strands into a ball. Then you can lift the forkful of spaghetti to your mouth quite easily.

Meat Balls 'n Spaghetti (Makes 4 servings)

- 3 cups canned tomatoes
- 1½ cups water
- ⅓ cup finely chopped onion
- 1½ tablespoons brown sugar
- 1½ teaspoons salt
- 1½ teaspoons chili powder
- Dash pepper
- 1 pound ground beef
- ½ cup finely chopped onion
- ¼ cup soft bread crumbs
- 1 slightly beaten egg
- 1 teaspoon salt
- Dash pepper
- Flour
- Cooked spaghetti

Combine the first 7 ingredients. Simmer uncovered about 30 minutes. While sauce is simmering prepare meat balls. Combine ground beef, ½ cup onion, crumbs, egg, 1 teaspoon salt, and pepper; form into 16 balls about 2 inches in diameter, roll in flour, and brown in hot fat in 10-inch skillet. Pour sauce over meat balls. Simmer uncovered about 30 minutes or until meat balls are done. Serve hot over cooked spaghetti.

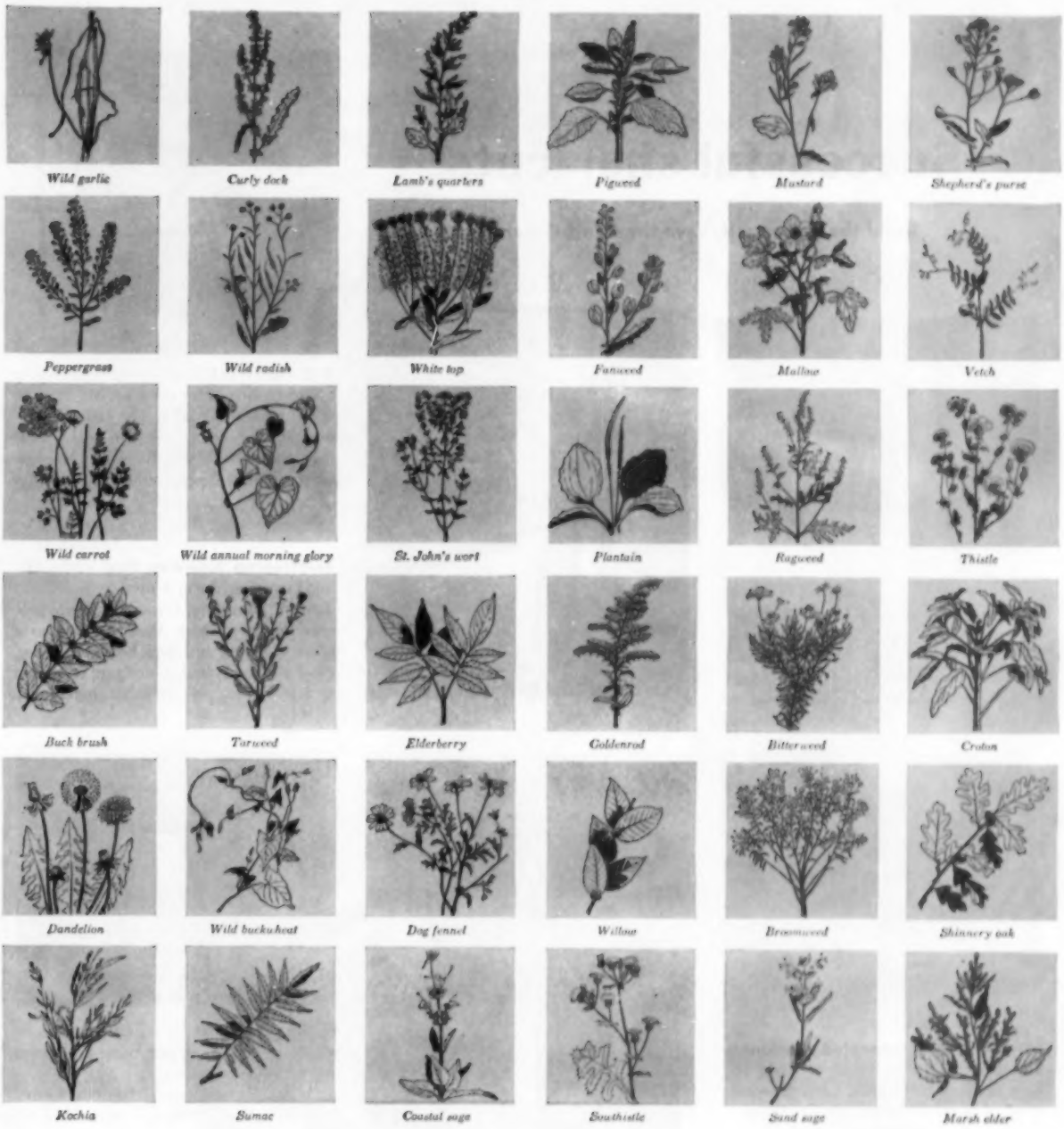
Dollarsaving storage

Good storage can be found for a price—a cheap one too, if you're handy with the saw and hammer. Here's a good example of what you can do with an unpainted, ready-built chest, combined with cabinets you build yourself. Wasted space can be turned into working space when used this way.

The end of a dining area was used for this built-in arrangement, making a place for dining-room linens, silver, trays and also other miscellaneous items.

The drawer unit was an unpainted double chest combined above with cabinets built by the home handyman. This is a trick you can use in a bedroom, kitchen, utility room, or most any other spot. Even an old dresser could be cut down, painted and fitted into a built-in arrangement in a home for extra storage. It's dollarsaving and timesaving to use a combination like the one shown here.

Photograph: Hopkins



Just 36 more reasons why more farmers use Esteron 99

These aren't the only weeds Esteron 99® will control. But they show the big reason more farmers use Esteron 99 than any other weed killer: its wide-range control of broad-leaf weeds.

Test any other weed killer. Will it control all these—and others?

Then check it against other Esteron 99 advantages.

Esteron 99 mixes well even in hard water, giving uniform coverage—not weed killer in some places, just water in others. And it won't curdle, clog or cause corrosion in your sprayer.

Low-volatile esters for greater safety to nearby crops . . . top performance even in hot, "tough-weed" weather . . . plus a gallon-for-gallon savings from greater effectiveness—all make Esteron 99 your wisest buy in weed killers.

THE DOW CHEMICAL COMPANY, Agricultural Chemical Sales Dept., Midland, Michigan.

CONTROL GRASS WITH DOWPON

Get Dowpon (containing 85% dalapon sodium salt) for long-lasting leaf-to-root kill of tough grasses.*

*TRADEMARK OF THE DOW CHEMICAL COMPANY

BRUSH KILLERS, SOIL FUMIGANTS, GRAIN FUMIGANTS, INSECTICIDES, IRON CHELATES, FEED ADDITIVES, ANHYDROUS AMMONIA, DEFOLIANTS.

Dow presents
THE RED FOLEY SHOW
every Saturday. Consult radio listing for time and station.

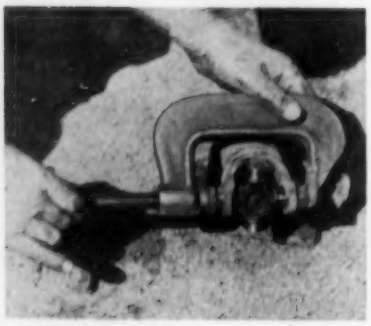
YOU CAN DEPEND ON DOW

Successful shortcuts®

Build them yourself; save time and dollars

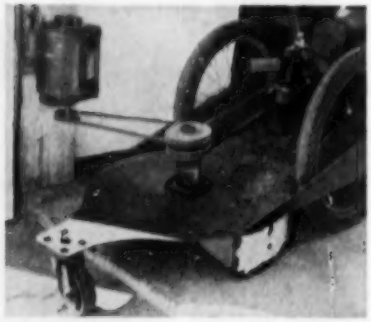
Photographs: Wettach; Marley; Stover; Krill; Clark

A 15-ton truck jack furnishes power for a simple farm shop press on Bill Haxton farm, Genesee, Idaho. The jack causing downward pressure, rests on heavy plate that slides on 12" sturdy posts. The plate is returned to position by the springs

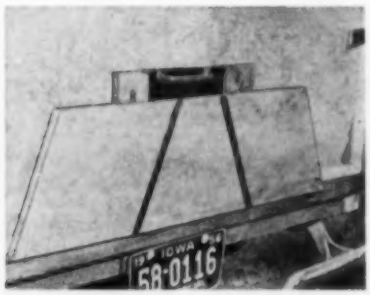


C-clamp is used by John Krill, Ohio, when replacing needle-bearing cages on universal joints. Clamp holds and gently presses both cages into place without disturbing position of the needle bearings

Telescoping highway flag for trailer and farm machinery is used by Raymond Thielen, Manning, Iowa. The removable unit fits into a pipe that's welded to a plate. A spring and hook hold it in place. Plate can be bolted to endgate as shown at left or fastened to other machinery

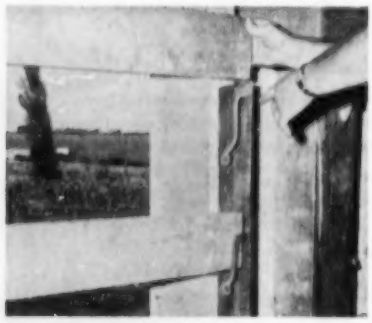


Starting engine-operated machinery was made easier by Stanley Clark, Sr., East Bradenton, Florida, with the use of a small electric motor mounted on a plank. V-belt goes from motor pulley to pulley that is on machine to be started. Mounted motor unit can be easily moved

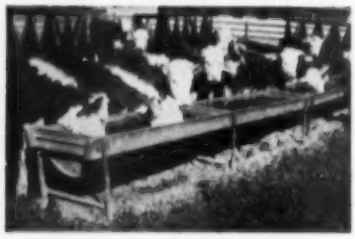


Folding endgate is handy for use in wagon or pickup for emptying grain into an elevator or sacking it.

Heavy plywood spout has edges covered with metal hinges, is supported by hooks. Handle of bent iron rod was welded to heavy sheet-metal slide. Used by John Palmer, Columbus Junction, Iowa.



Handy gate on Ted Hebert farm, Christian County, Illinois, serves as ventilating door on cattle shed. Planks, used to withstand cattle pressure, fit into brackets welded to angle iron. Washer welded to lower side makes wiring boards possible



Fifty-gallon steel drums were used by Roz Morris, Audrain County, Missouri, for making silage and grain bunks. Each bunk consists of 4 drum halves supported with 2x6 lumber, welded scrap-pipe legs.

Portable unit at right, also on the Roz Morris farm, protects salt and minerals, is on skids for easy moving.

Down payment...one old headache

This farmer just made a real buy. He used his old tractor as down-payment on a beautiful new Ferguson 40.

It's a trade where the farmer can't lose. Because now—at low cost—he has a tractor that's powered to save job time. The Ferguson plows with 3 bottoms in most soils, using much less gasoline. The Ferguson hitch saves time in the yard and in the field. So does maneuverability. And advanced hydraulic control speeds up closer work—whether it's cultivating, grading or contour plowing.

"It's got the Ferguson System," is the way most owners explain how they can do so much with this tractor.

No fiddling with complicated adjustments. No wasted fuel. You get full use of power—automatically.

These are facts which can be pretty pleasant when you total up the result of a year's work. There's no need to let an older tractor hold back your farm profit. Talk to your Ferguson dealer. Talk performance. Talk trade. Perhaps your tractor, too, will be the down payment. So, see him first . . . or see him last. Either way you can't lose. *Ferguson, Racine, Wisconsin.*

Ferguson POWERED TO SAVE YOUR JOB TIME

Enjoy all 3 on a
TENNESSEE *Vacation*

This year enjoy 3 vacations in one. Vacation in Tennessee, land of the Great Smokies and the Cumberlands, land of 20 blue, fish-filled Great Lakes, land of Jackson, Houston, Boone, Crockett, historic homes, TVA and Oak Ridge. Write for a profusely illustrated, 40-page Guide to Tennessee's vacation and convention attractions.

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It's wonderful the way Chewing-Gum Laxative acts chiefly to

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Here's a secret millions have discovered about FEEN-A-MINT, the wonderfully different chewing-gum laxative.

FEEN-A-MINT is different because you chew it. It's different, too, because **it removes mostly waste—not good food!** FEEN-A-MINT **does not** work in the stomach, where your food is being digested. That's why it **does not** take away a lot of the good food you need for energy.

Doctors know that FEEN-A-MINT works chiefly in the lower **bowel . . . removes mostly waste, not good food!**

So to feel like a million, do as millions do. Chew delicious FEEN-A-MINT . . . and feel full of life and energy! Get FEEN-A-MINT today. 16 tablets, 35¢—also small and economy sizes.

Feen-a-mint
THE CHEWING-GUM LAXATIVE

"How to Build Fence," a *Successful Farming* 35 mm filmstrip. Includes film, and printed commentary—only $3.50

Equipment for the

Farm business center

Drawing: Roy Miller

Equip the farm business center with a specially designed corner for everything. Keep necessary items handy

The business center, located near the rear entrance—kitchen, workroom, or central hallway—handy to the farm buildings, is one step to a used-more farm office.

Here's a suggested collection of "go-together" items sure to make an office-efficient center. A good lamp with diffusing bowl and 100-watt bulb, comfortable desk chair, 2 or 3 standard-size filing drawers, plus 2 or 3 smaller desk drawers make for record-time business keeping.

Ready on top of desk or hanging on pegboard above desk are: incoming mail basket; outgoing mail (in clock letter holder); calendar large enough to write appointments on and see the whole month at a glance; clipboard of current receipts (to be entered in account book); clipboard for unpaid bills; farm account book (in holder on pegboard); books referred to often; a desk pen.

Photographs: Hopkins

Partitions in the top drawer keep small supplies untangled and easy to find.

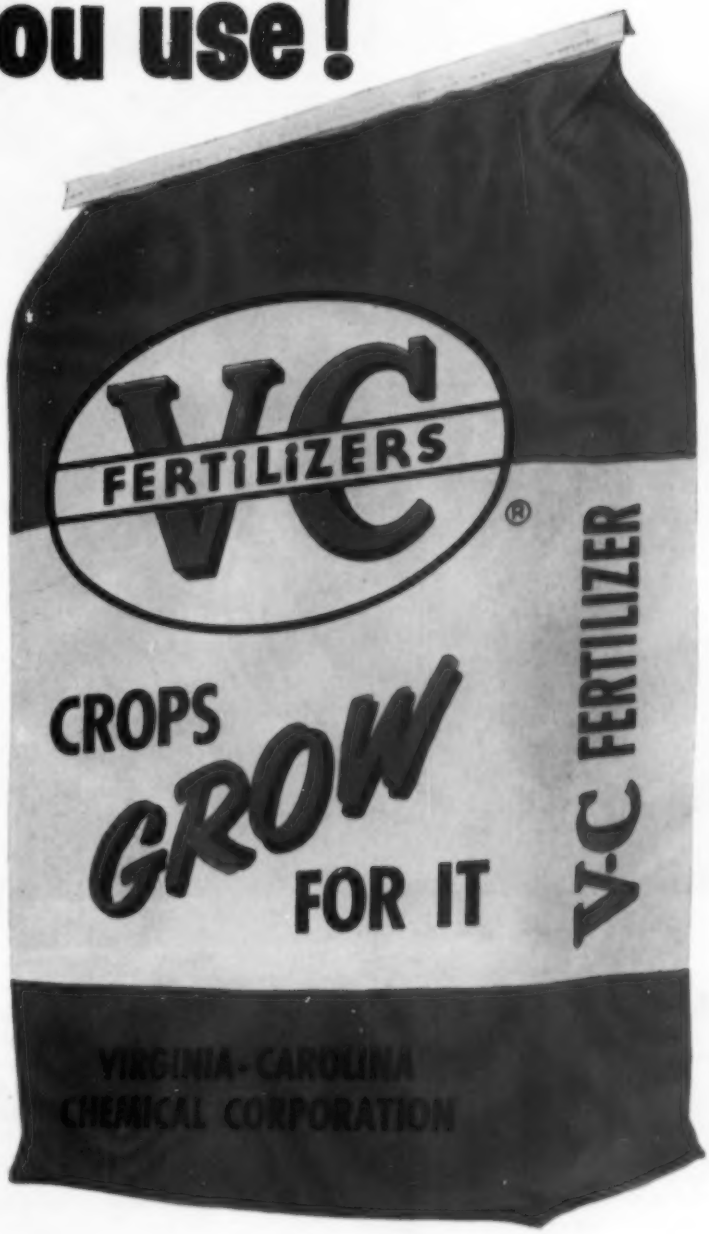
Knife rack from a variety store used in this drawer keeps pencils, scissors, ruler, index tabs, and eraser handy. Muffin tins, painted a favorite color, keep smaller supplies sorted—paper clips, thumb tacks, rubber bands, pegboard pegs, and stamps. Additional supplies are a note pad, checkbook, mailing stickers.

A stationery drawer with dividers adds a feature of convenience. These partitions were made from ½-inch hardboard to fit.

Cut and glue side pieces at angle so stationery dividers fit in horizontally and rest on side pieces. Allow space between each divider for ½-inch thickness of stationery. Recess dividers into drawer so paper won't catch as drawer closes. Front partition is vertical to hold envelopes.

Let your crop choose the fertilizer you use!

It's easy to determine the amounts of the various plant foods a particular crop requires to make vigorous growth and produce big yields. Ask your County Agent or Experiment Station. It's easy to find out whether your field is high or low in each of these plant foods. Your soil tests will tell you. The most profitable fertilizer for you is a V-C Fertilizer ***precision-made*** to provide the difference between what your soil contains and what your crop needs. That's the fertilizer that pays you the biggest return per dollar invested. That's the fertilizer your crop would choose for you to use!



See Your V-C Dealer!

It pays to plan ahead and place your order early. Give your V-C Dealer time to get your V-C Fertilizers to you on time. Tell him you want the right grade ***precision-made*** for each crop and soil. You'll get rich, mellow blends of better plant foods scientifically balanced to fit your needs. Your crops will thank you with extra yields and extra profits!

The best grade PRECISION-MADE for YOUR crop

V-C Fertilizers are ***precision-made*** in the analyses recommended by your Experiment Station or Extension Service.

V-C Fertilizers are ***precision-made*** in combinations of plant foods to meet needs indicated by soil tests.

V-C Fertilizers are ***precision-made*** to include major plant foods *plus* secondary plant foods and minor elements.

Famous for crop-producing power and easy-drilling quality since 1895!

Cooking under cover

Here's how to fix a complete foil-wrapped fish dinner. Place fish fillet on a piece of heavy foil. Top with an onion slice, green-pepper strips, mushrooms, tomato wedges

Photographs: Stanley

It's important to seal edges of the foil tightly to prevent loss of any of the tasty juices. Fold top edge over in drugstore type wrap. Fold the ends over and press them down tightly

Here's a real gilt-edged meal-in-a-packet. Make a crosscut in top of foil package and fold back edges to see a complete meal—fish fillet with vegetables. Serve with a perky pineapple cottage-cheese salad and thick slices of hot garlic-buttered French bread.

To prepare the bread, first slice, cutting not quite through loaf. Place a pat of butter between each of the slices and sprinkle with garlic salt as generously as is desired. Wrap in foil and heat. Serve while hot.

Silver-lined meals are a welcome variation for the homemaker and her regular mealtime customers. It's fun to speculate on the contents of the solid silver nugget that you find on your plate—and it's a real attention getter.

These packets can contain fruit, vegetables, and several types of meat—from steak and hamburgers to fish and frankfurters. The beauty of this type of cookery is that it can be prepared in advance, is easy to do, and takes little cleanup.

Fish in Foil (Makes 4 servings)

- 1 1-pound package frozen halibut fillets, thawed
- Lemon juice or Worcestershire sauce
- 2 medium onions, thinly sliced
- 2 tomatoes, quartered
- 1 3-ounce can (¾ cup) broiled mushrooms
- ½ cup chopped green pepper
- 4 tablespoons butter
- Salt and pepper

Divide fillets into 4 servings. Place each on a 12x18-inch piece of heavy-duty foil or double thickness of regular foil. Sprinkle the fish with lemon juice or Worcestershire sauce. Arrange remaining ingredients equally over fish fillets. Bring edges of foil together at top and make a double fold. Make a double fold at each end. Place foil packets on baking sheet and bake in moderate oven (375°) about 25 minutes. Serve in foil wrap.

Hamburgers in Foil (Makes 4 servings)

- 1 pound ground beef
- 2 tablespoons catsup
- 1¼ teaspoons salt
- ½ teaspoon monosodium glutamate
- Dash pepper
- ¼ cup pickle relish
- 4 slices onion

Mix ground beef with catsup, salt, monosodium glutamate, pepper. Form in 8 very thin patties, using ¼ cup meat mixture per patty. Spread 4 patties with pickle relish; top with remaining patties, sealing edges together. Top each patty with onion slice and wrap each tightly in aluminum foil. Place on broiler pan, folded side down, 3 inches from heat. Broil 10 minutes; turn and broil 10 minutes longer. To brown, slit foil, fold back; broil 3 minutes.

Foil-baked Steak (Makes 4 servings)

- 1½ pounds round steak, cut ½-inch thick
- Garlic salt
- Pepper
- Worcestershire sauce
- Onion slices
- Carrot strips
- Celery strips

Cut steak in 4 serving-size pieces. Sprinkle each piece of steak with garlic salt, pepper, and several drops of Worcestershire sauce. Place an onion slice, a carrot strip, and a celery strip atop each steak. Place each steak on 12x18-inch piece of heavy-duty foil or double thickness of regular foil. Secure top with a double fold. Turn side edges under and make a double fold. Seal all edges tightly. Bake in hot oven (450°) for 45 minutes. Serve in foil wrap.

More recipes on page 132

Distinctive new General Electric Refrigerator-Freezer

New "Straight-Line" Design!

OUTSIDE. Refrigerator fits flat against wall or square into corner. "Straight-Line" Design gives a new beauty to your kitchen.

New "Touch-Action" Features!

INSIDE. "Touch-Action" puts all foods at your fingertips in the 10-cubic-foot refrigerator section and the 5-cubic-foot freezer.

EVERY line is smooth and straight in this smart new General Electric.

That's why you can set it *flush* against the wall. And by simply hanging wall cabinets around it, you can make it a "built-in" without the expense!

Inside, General Electric's exclusive "Touch-Action" Features put all foods at your fingertips.

A touch of your toe opens the Magnetic Safety Door on the refrigerator. Since it has no latch, it helps protect children from the danger of being locked inside.

See it at your General Electric dealer's. Ask about his easy terms and generous trade-in allowance. Household Refrigerator Dept., General Electric Company, Appliance Park, Louisville 1, Ky.

NOW, EVERYTHING AT YOUR TOUCH!

TOUCH . . . and the shelves revolve, putting all the food you want within easy reach!

TOUCH . . . and the freezer rolls out. You see and choose what you want at a glance!

TOUCH . . . and the Magnetic Safety Door opens to the automatic defrost refrigerator.

Progress Is Our Most Important Product

GENERAL ELECTRIC

now why didn't someone think of this before...

Cooking under cover

From page 130

Buffet Potatoes (Makes 4 servings)

4 medium baking potatoes
3 tablespoons butter
Salt and pepper
Chopped parsley
½ cup grated sharp process American cheese
½ cup light or heavy cream

Pare potatoes and cut lengthwise in strips as for French fries. Place in center of large piece of aluminum foil (use double thickness if not heavy). Shape foil to form baking dish. Dot potatoes with butter, sprinkle with salt, pepper, parsley,

Foil-wrapped food is versatile. You can fix a piece of steak with celery and onions or bake squash till it is tender and oh, so good. Prepare ahead and slip into the oven later

and cheese. Pour cream over. Bring edges of foil up to cover potatoes; seal all edges to make a tightly closed package, but don't press. Place on cooky sheet or shallow pan. Bake in hot oven (425°) 40 to 50 minutes. To serve, place foil-wrapped potatoes on platter; fold back edges of foil. Sprinkle with extra chopped parsley.

Acorn Squash (Makes 4 servings)

2 large acorn squash
Salt and pepper
¼ cup butter
¼ cup brown sugar
Nutmeg

Split acorn squash in half and scoop out seeds. Place each half on a large square of foil. Sprinkle squash centers generously with salt and pepper. Add 1 tablespoon butter, 1 tablespoon brown sugar and a dash of nutmeg to each. Bring foil up over each squash and twist ends together to seal. Bake in hot (400°) oven 75 minutes or till tender.

Foil-cooked Hot Dogs (Makes 8 servings)

2 cups finely chopped frankfurters
½ cup grated sharp process American cheese
2 hard-cooked eggs, chopped
3 tablespoons chili sauce
2 tablespoons pickle relish
1 teaspoon prepared mustard
½ to ¾ teaspoon garlic salt
8 coney buns, split

Combine all ingredients except buns. Partially hollow out soft centers of buns; fill with frankfurter mixture and close. Wrap each bun in aluminum foil, sealing securely. Place on baking sheet. Bake in moderate oven (375°) 10 to 12 minutes.

Arrange furniture on paper first

If you're planning to rearrange your furniture, why not arrange it on paper first and spare yourself tired muscles? Or, if you plan to add to your present furniture, take a look at the over-all room on paper and you can see just what size piece of furniture will fit the spot you wish to fill.

First measure your room and then draw its outline on squared paper, letting each square represent 1 foot. Indicate the windows, the doors (which way they open), electrical outlets, telephone, radiators, fireplace, and built-ins.

It's a good idea to draw in the traffic lanes you want to keep open. They're easy to forget when you're working on paper and not in the actual room.

Then measure your furniture in the same manner as is shown at right. Use the same scale, each square equals 1 foot, and cut out oblongs, squares, rectangles, or circles from the squared paper. Now place them on the outline of room and you can arrange and rearrange without pushing and shoving heavy furniture around.

If you're considering buying a new piece of furniture, draw it to scale, place it on the graph paper, and you can tell at a glance whether it will fit in the space you had picked out.

Try a furniture arrangement kit

Successful Farming has prepared a complete Furniture Arrangement Kit which contains several sheets of graph paper and a page of furniture cutouts for every room in your home. The kit also includes a list of rules and principles to guide you in finding the best furniture arrangement for your living room, bedroom, and dining room.

If you have a furniture arrangement problem, make your own room diagram and furniture cutouts or order *Successful Farming's* Furniture Arrangement Kit by sending 25 cents to *Successful Farming, 4803 Meredith Building, Des Moines 3, Iowa.*

HOW-TO-DO-IT:

easy way to clean off burned-on food and grease

Reach for S.O.S.® the minute food burns on. Each pad is tightly interwoven, so it does the toughest jobs.

Wet the pad, squeeze up the soap. There's soap right in every pad, ready to go to work instantly.

Rub briskly to clean and polish. S.O.S. cuts through burned-on food and grease, shines at the same time.

Use S.O.S. regularly on all your pots and pans. S.O.S. shines as it cleans, keeps pans bright for years!

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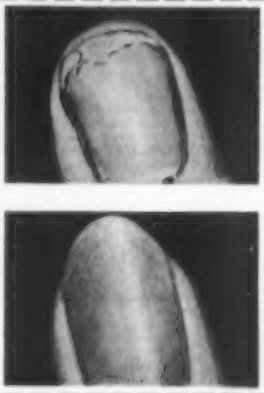
How to Have a Well-dressed Home. *Successful Farming's* colorful, 35-mm filmstrip, "Make Yours a Well-dressed Home," presents all basic principles in home decorating, furniture arrangement, color harmony. $9.50 from *Successful Farming*, Des Moines 3, Iowa.

THE ONE WAY TO HELP

SPLITTING NAILS

which has been proved by published medical research, is that tried and true

KNOX Gelatine



taken once a day, one envelope (115-120 grains), in fruit juice, bouillon or water. It is a food factor that does it. For full details mail a post card to Knox Gelatine, Johnstown, N. Y., Box SF-10.

AT YOUR GROCER'S

Tense, Nervous Headaches Need This Relief

A survey shows 3 out of 4 doctors recommend the famous ingredients of Anacin to relieve pain. Here's why Anacin® gives better *total* effect in pain relief than aspirin or any buffered aspirin:

- **ACTS INSTANTLY:** Anacin goes to work instantly. Brings fast relief to *source* of your pain.
- **MORE EFFECTIVE:** Anacin is like a doctor's prescription. That is, Anacin contains not one, but a combination of medically proven ingredients.
- **SAFER:** Anacin simply *can not* upset your stomach.
- **LESSENS TENSION:** Anacin also reduces nervous tension, leaves you relaxed, feeling fine after pain goes. Buy Anacin *today!*

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For Row Crop, Conversion, Ford & Ferguson Type Tractors
Digs, moves, lifts up to one ton! Dozer blade and snow bucket attachments interchangeable with regular bucket...installed in matter of minutes. All action easily controlled from tractor seat.

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ELECTRIC DRY CELLS, batteries or light socket do it without tearing or twisting of delicate parts. Press Button, the rooster becomes a **PERMANENT CAPON.** New fast, easy way. No over production past 50 years. Profit and pleasure are yours, illustrated bulletin explains. No cost or obligation. Write to
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Do Your Own Arc Welding!
SAVE $$$ on repairs! write for FREE Welder's Vest Pocket Guide

Get top performance at low cost on repairs, maintenance etc. around your farm. A variety of jobs can be handled with a Hobart Welder. Investigate today!
HOBART Bros. Co., Box SF37, Troy, Ohio

Handy features for

Easier vacuum cleaning

To make vacuuming less work, cleaners move easily.

Portables (1) are lightweight, carry or strap on for special cleaning jobs. **Canisters (2)** use easy-to-move principles, glide across room behind user on own exhaust air. **Big wheels (3)** respond effortlessly to operator's tug.

Movable wheels (4) on a cylinder can even mount stairs. **Tank types (5)** have runners and casters that move when operator tugs at wand. **Uprights (6)** roll ahead, clean as they go. To carry (7) by handle for long trips, roll on casters when cleaning.

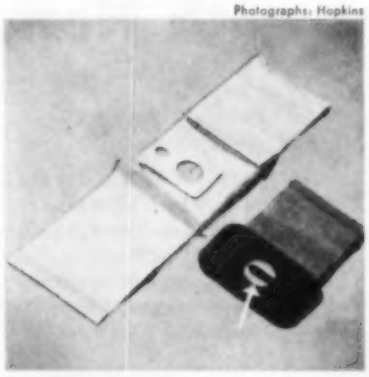
Handy storage speeds up cleaning. See three typical features at right. Left: Prop cleaner against a wall when the tube is inserted in the cleaner opening.

Above right: Cord winder, saddle holder cares for the cord and attachments. Below: Removable attachment carrier fits over the top of the cleaner.

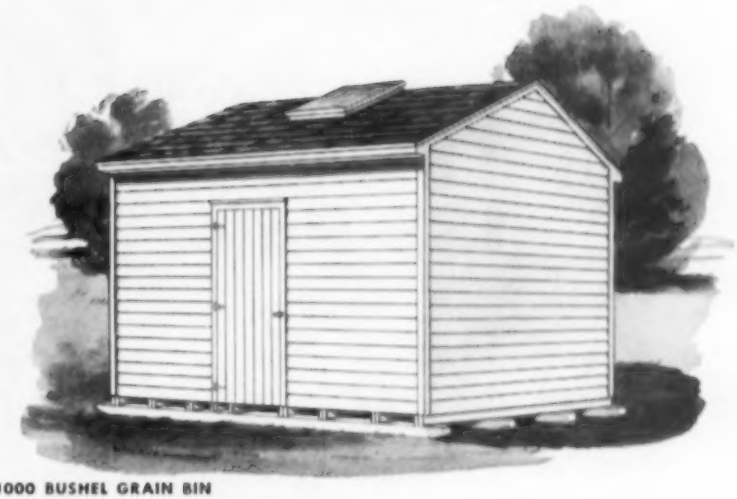
Tubes that lock at connecting points never fall apart in use. Above are 4 tubes, typical of several cleaners that lock together and to attachments. Three tubes (shown above left) separate into 2 pieces when clamp or button locks are released. Tube with arrow shrinks to half its length when unlocked. Aluminum tubes are lightweight and easy to handle

Attachments are easier to use: (1) A 2-in-1 floor brush, weighted on one end, flips over effortlessly for carpets or bare floors; (2) Floor brush on wheels (for easier mobility) cleans all types of floors—bare, smooth, and carpeted; (3) Brush attachment for smooth and bare floors has "butch" haircut to surround small objects on the floor with suction

Photographs: Hopkins



Toss away dirt without leakage in a paper bag made for the cleaner. Disposable bags with small dirt-entrance opening and large capacity minimize servicing. Large bag (above) holds 8 to 10 weeks' accumulation of dirt; smaller bag has a self-sealing device to prevent escape of picked-up dust



1000 BUSHEL GRAIN BIN
NO. F-2116

It's easy for farmers to build with New *Build-Fast Plans*

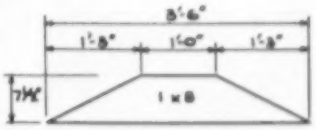
Build-Fast plans mean just what they say. They were developed to help the farmer build quickly, easily, and with little or no waste. All Build-Fast plans are complete with cutting diagrams and lists showing the quantities and sizes of all framing members. Assembly drawings show exactly how the pieces go together. When the building is finished, you'll have practically no material left over.

Shown above is a 1000 bushel grain bin. It is one of the many carefully tested plans that make up the Build-Fast system. All are available as part of the Weyerhaeuser 4-Square Farm Building Service.

For full details on Build-Fast plans, see your Weyerhaeuser 4-Square Lumber Dealer. He will be happy to show you the complete 4-Square Farm Building Service with its scores of other valuable, chore-saving designs for farm buildings and equipment. He also will show you the way to better farm living through his large selection of modern farm home plans.

The coupon will bring you helpful planning material. Mail it today!

PORTABLE HAY SHED No. F-2121
This hay shed was designed to meet a specific need of modern farming. It is carefully engineered to give you service at low cost.



CUTTING DIAGRAMS show how to cut each piece of the framing for perfect fit, and to prevent mistakes and eliminate waste.

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Plan your entire farm building program with these colorful books—they illustrate scores of buildings and equipment items, and many beautiful farm homes.

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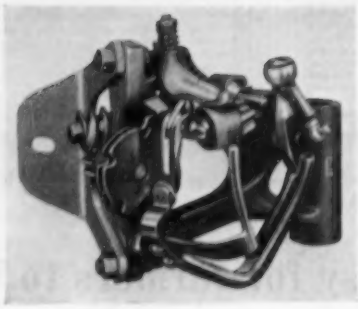


"A Thousand Bales

Case 140 baler makes 14x18 bales of uniform length, with wide range of setting. You have choice of twine or wire tie, Case axial-flow air-cooled engine, V-type engine, or PTO drive.

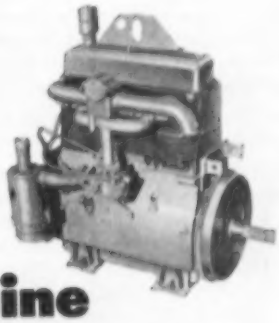
Big Tonnage Balers with New,

Case 160 baler makes big 16x18 bales at rates up to 12 tons an hour in good conditions. Twine and wire models. Case air-cooled engine, V-type engine, or PTO drive.

without a Miss"

"I have gone as high as 1,015 bales without a miss on the knotter."—*Len D. Elliott,* Washington.

New Farm-Size 133 Baler brings big-baler features . . . such as overhead feed . . . to the economy-priced class. The new Case 133 baler shown above has full 26-inch stroke for faster baling in heavy hay . . . six hay dogs for big, firm bales in fewer strokes. Fenders, exclusive with the 133 baler, shield the knotter cams and feed auger reverse gear from dirt and stones, guard you from losing time in field delays. Best of all, super-simple, positively-timed knotters beat anything you ever saw for tying hundreds . . . sometimes thousands . . . of bales without a miss. You save time and you save hay! You save more of the protein-rich leaves, too, because the new Case 133 handles hay fewer times from windrow to bale chamber, and handles it gently all the way. Shown above with a Case 300 tractor, the 133 baler is on display at your Case dealer. Be sure to see it, and arrange for demonstration.



More Powerful Air-Cooled Engine

Double plunger action of Case 140 and 160 balers puts a "one-two punch" into slicing and compressing, pushes out amazing tonnage of compact, well-formed bales. New Case axial-flow air-cooled engine provides higher peak capacity, long life, low upkeep. V-type air-cooled engine or PTO drive available. Wire models make only one tie per wire, tuck ends down, leave no loose clippings. Wire twister or twine knotter mounted in unit frame for permanent alignment of working parts.

New Case Crop-Way Purchase Plan starts baler to work with trade-in or down payment. Later payments come at times when you have money coming in. Get details from your Case dealer.

Bale More Tons Per Twine Dollar...

with high-strength, full-measure Case baler twine, treated to resist rodents, insect and mildew damage. For catalog or folders, check items that interest you. Address J. I. Case Co., Dept. C-777, Racine, Wis.

- ☐ New 133 Baler, 14x18
- ☐ 160 Balers, 16x18
- ☐ 140 Balers, 14x18
- ☐ NAP-3 Balers, 17x22

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J. I. CASE COMPANY RACINE, WISCONSIN

You make farming a more profitable business when you choose and use full-line Case tractors, balers, combines, and other machines.

the most versatile gun you can own . . . a

Savage 24

The only gun of its kind in America . . . combines precision .22 cal. rifle and .410 gauge shotgun barrels. With the famous all-purpose Savage 24, you're set for anything . . . fun, fur or feathers—all year 'round.

Use the .22 upper barrel for plinking, target shooting or small furred game. Flick the selector and the .410 gauge lower barrel is set for flying pests, game or targets.

Perfect for use around the farm or camp, the Savage 24 is also ideal for the beginner. Lightweight (about 6¾ lbs.), compact and streamlined. Upper barrel shoots all .22 rimfire cartridges, lower barrel chambered for .410 gauge 2½" or 3" shells. Single trigger . . . single sighting plane . . . selector button permits instant choice of either barrel. Ramp-type front and adjustable rear sights . . . walnut stock . . . take-down. See it at your dealer's now.

There is a complete line of Savage, Stevens and Fox shotguns and rifles for every shooter and every kind of shooting. *Write for free rifle or shotgun catalog. Savage Arms Corporation, Chicopee Falls 25, Mass.*

$41.50

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SAVAGE • STEVENS • FOX FIREARMS

ALL PRICES SUBJECT TO CHANGE SLIGHTLY HIGHER IN CANADA

This unique firearm was a famous and familiar gun during World War II. Because of its versatility, it was used as standard equipment by the U. S. Air Force in their "Survival Kits". The Savage 24 enabled crews of downed aircraft to survive indefinitely by shooting small game for food.

Drive-through granary

This drive-through granary was designed and built of native lumber by Morris Magee, Gentry County, Missouri.

Magee chose a location with sloped ground, then built a concrete foundation with 8′ drive-through clearance. Double bin granary is 10x12′ and 16′ high. Sides are of 2x4s laid flat, each nailed with 20 spikes on lower part and 16 near top. Strong 4″-thick sides were then covered with sheet metal. Corner braces give further support. Floor of the bin is of 10′ railroad ties.

The bin is filled by a regular grain elevator, and unloaded by gravity into a feed trailer.

Milo-molasses—

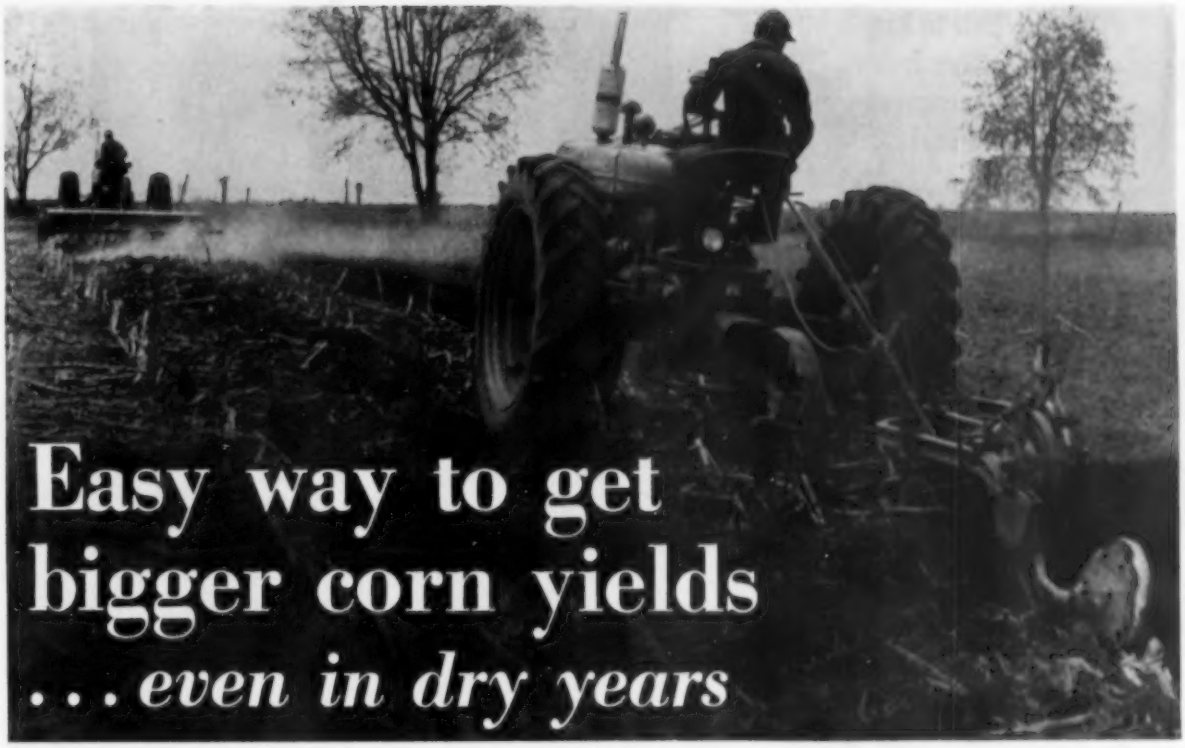
makes good feed mix

Farmers who substitute milo for corn in hog-fattening rations might make more money by adding 5 percent molasses to the milo.

In tests at Kansas State College, 50-pound pigs fed shelled corn and a protein supplement gained 1.74 pounds a day, exactly the same as those that got rolled milo, 5 percent molasses, and a protein supplement. It took 329 pounds of corn and 52 pounds of protein mix for each 100 pounds gain. This compared with 371 pounds of milo and molasses and 49 pounds of protein mix.

At $1.50 a bushel for corn and $1.80 per hundred for milo (1956 average support prices), that would be $8.80 worth of corn compared with $6.68 worth of milo and 40 cents worth of molasses.

Those on milo and molasses ate slightly less protein mix than those on corn, so the gains were the same for the two groups, but the profits were greater for those on milo and 5 percent molasses.



Easy way to get bigger corn yields

...*even in dry years*

How Spring plow-down of Nitrogen not only helps you go after 22 extra bushels per acre, but also gives you vital drouth protection:

THINK what an extra 22 bushels of corn per acre could mean to your profits this year! According to agronomy reports, Nitrogen can make an increase like this possible. And by applying your Nitrogen at plow-down time, you stand to get valuable extra benefits:

First of all, plowing down a Nitrogen fertilizer such as Spencer "Mr. N" Ammonium Nitrate can help corn survive an extra ten days to two weeks in case of drouth!

Second, fertilizer needs moisture to trigger it into action, and plow-down puts "Mr. N" deep into the root zone where it stands a better chance of getting moisture—even in dry weather. Then, corn roots grow deep to reach the Nitrogen, and travel down far enough to use sub-soil moisture. But that's not all!

When you plow-down Spencer "Mr. N" you help speed up decomposition of corn stalks and trash. That helps release extra plant food to corn!

What's more, when you apply "Mr. N" at Spring plowing, you end worries about the spreader getting bogged down if rain comes before planting.

Of course, to make every acre produce the highest possible yield, you'll want to apply starter fertilizer at planting time, as well as mixed fertilizer when you plow down your "Mr. N". But let's take a look at what the Nitrogen alone can do:

$9.60 Investment Pays $27.50

In the north-central states, college agronomists worked out the increases that could be expected with Nitrogen. Corn yield without added Nitrogen averaged 44 bushels per acre. But with 80 pounds of Nitrogen per acre, yield jumped to 66 bushels!

Even if you should only get $1.25 per bushel, those extra 22 bushels would pay you $27.50. Figuring 12¢ per pound for Nitrogen from Spencer "Mr. N" gives you a total cost of $9.60. So you could expect to make an extra $15.90 per acre *clear profit*.

Two Weeks Extra Grazing from Your Pasture

Spring is the time to apply "Mr. N" to pasture, too, for best results. Many farmers who top-dress pasture with "Mr. N" report they get two full weeks of extra grazing!

With results like these, it's easy to see why so many farmers prefer Spencer "Mr. N". In fact, a recent independent survey showed that "Mr. N" is the first choice of more Midwestern farmers than any other nationally-advertised brand!

Flows Freely for Easy Application

One of the things farmers like most is that Spencer "Mr. N" Ammonium Nitrate is made in round, uniform prills that won't cake or won't clog the spreader.

Spencer "Mr. N" is the first Nitrogen guaranteed free flowing after a full year's storage under proper conditions. That's because it comes in polyethylene-lined bags for 100% dryness!

This year, why don't you, too go after the greatest return from your fertilizer dollar? See your fertilizer dealer right away for Spencer "Mr. N" Ammonium Nitrate Fertilizer!

Get all the Nitrogen you pay for!

Insist on Spencer "Mr. N" Ammonium Nitrate Fertilizer. You can see it, feel it, and apply it when you want with your own equipment. Spencer Chemical Co., Kansas City, Mo. (ADVT.)

How to keep others from thinking you are deaf...

Fashionable

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New styling adds versatility. Wrought-iron furniture has taken on new style and color so that now it can be used indoors as well as outdoors. It is available in pastel shades that blend with your color scheme indoors and will retain its color outdoors in spite of bad weather. Most all the colored wrought-iron furniture is rustproof, but check to be sure

New summer furniture

From page 58

The trend in summer furniture design is toward pieces of furniture that are more functional. Shown here is furniture that can be used indoors as well as outdoors

Photographs: Hedrich-Blessing

New styling adds practicality. This couch and chair are at home in any room. Their scale and proportion are such that they can be used in a small family room or can be grouped in a larger living room. The softly padded covers slip off and you have two pieces of metal lawn furniture to move outside on the terrace at some later date

Graceful new Ford Fairlane 500 Town Victoria

There's "beef" beneath Ford's beauty!

Ford's exciting new longer, lovelier lines ride sweet and low on the new "Inner Ford"—the brawniest, beefiest and quietest "unseen beauty" in Ford's field.

Don't let 'em fool you. Under their glamour these Ford lovelies are tough.

They're built to take the kind of pasting that an old-fashioned back road, heaved by winter cold and gullied by spring rains, can dish out. With new suspension front and rear, new full-cradle frame, new Cushion-Quiet body mounting, you'll wonder where that chuck hole went.

Rough or smooth there's GO to spare with a big, silent, Thunderbird V-8 or new Mileage Maker Six under the front-hinged hood. See your nearest Ford Dealer.

Handsome, big, new Ford 9-passenger Country Sedan

Action-Test the new kind of FORD

on farm after farm...

FUNK'S G HYBRID

We know they're AMERICA'S GREATEST HYBRIDS... we weighed and compared!

BORROW THIS IDEA

Borrow this idea from these good corn growers: *weigh and compare. Know* which hybrids are best.

Don't be satisfied with b'guess and b'gosh yield estimates. They may be costing you, *right now*, 5 to 10 bushels an acre. *Free* bushels, to boot, because it takes the same work, same fertilizer, same land. You just use higher horsepower Funk's G-Hybrid seed.

These men weighed and compared. They found Funk's G-Hybrids *consistently* outyielded all comers.

Don't just take their word for it. Borrow their idea. *Weigh and compare.* The scales will tell you: Funk's-G are America's Greatest Hybrids—*Plant them!*

THE PRODUCERS OF FUNK'S G-HYBRIDS

Baldwyn, Miss.—History's highest-producing corn-yield team—Lamar Ratliff and Funk's G-Hybrids—topped the nation again in 1956, with 257 bushels from the same measured acre which produced history's first over-300-bushel yield in 1955

Havana, Ill.—History's highest big-acreage average. More than 250,000 bushels from 2500 acres! This was Max Herriman's 1956 reward for switching to 100% Funk's G-Hybrids. This switch followed *five years of weighing and comparing* on Norris Farms which Herriman manages—years in which Funk's G-Hybrids beat the best of all comers by 11.6 bushels an acre.

Every bushel of corn raised on Norris Farm is fed to cattle.

ON FARM.. AFTER FARM.. AFTER FARM.. 5-STAR FUNK'S G-HYBRIDS ARE CONSISTENTLY GOOD, YEAR AFTER YEAR

Cedar Rapids, Neb.—Over-the-scales checks proved Funk's-G best by 18.5 bu. for Maurice Johnson

Caledonia, N. Y.—Edward Leathersich plants only Funk's-G on his 120 corn acres, after he compared

Stanford, Ky.—Fleece Gooch won Kentucky Corn Derby twice with Funk's G-Hybrids, after comparing

Marion, Ia.—R. L. Bowen states: "We have 60 bu. of G-Hybrids ordered, for all our '57 corn acreage"

Mondovi, Wis.—Harley Mikesel grew 162-bu. yield in '56, after Funk's-G won his '55 compare test

Newcastle, Ind.—Gerold Bond weighed and compared 3 years—found Funk's-G 10.1 bu. better

These hog raisers find

Orderly marketing pays

By Ed Mercer

Orderly marketing of hogs—topping out those that are ready and marketing them so that marketing is done many times a year instead of once or twice—has become a profitable management practice for Chris Grove and Sons, Columbia County, Wisconsin.

The Groves have given up the raising of their own feeder pigs. Instead they buy feeder pigs at a weight of 40 pounds at 6 to 8 weeks of age.

They have a standing order for the delivery of 30 or more feeder pigs to their farm every 2 months, feeding out from 180 to 200 head each year.

"We feel that we get all of the hogs to market in less time, which saves us labor and feed," says Harlan Grove, one of the sons. "When we raised our own pigs, we sometimes got batches on the market in 5 to 5½ months, but now we get at least a portion of every order of feeder pigs out at that time. We don't have to worry about taking care of and feeding our sows. We feel we get more uniform pigs that are thriftier and healthier."

The Groves actually average about 110 days to feed out each lot of new feeder pigs which they buy from a feeder-pig hatchery.

When a group of 5 or 6 of the 30 pigs in a batch are ready for market they are topped out and sent to market. A few days later, another batch may be ready. They are topped out and sent in, and so on until the whole group of pigs have been marketed.

This method of marketing gives them an opportunity to get an average price that is generally higher than they used to get when they sold only twice a year.

Most of the hogs marketed by Chris Grove and Sons, Harlan and Clairmont, have been accepted by the packer and paid for at a premium above the top market weight. That means they were in the Choice meat-hog range, the result of the breeding by the feeder-pig producers and the feeding program on the Grove farm.

The lesson they have learned from their records is that while some of their hogs hit the low markets, a bigger percent hit higher averages. That's what they have been attempting to gain in marketing hogs when they are ready.

The following chart shows the pattern of marketing followed by the Groves in marketing hogs in the year's period, July 11, 1955 through June 22, 1956:

Number pigs marketed	Date of marketing	Average wt. of hogs	Average price rec'd. per 100	Total return on hogs marketed	Days between market
5	7-11-55	242	$17.75	$214.77	—
7	7-13-55	222	18.25	284.66	2
5	7-15-55	217	17.95	188.11	2
8	10-7-55	212	14.40	244.02	90
9	10-8-55	215	14.25	274.96	1
30	10-10-55	212	14.50	884.80	2
8	1-3-56	210	11.15	187.26	86
8	1-11-56	207	11.25	186.69	8
5	1-23-56	211	12.40	130.78	12
6	1-31-56	223	14.35	192.25	8
4	2-7-56	209	12.65	105.60	7
6	2-24-56	*201	11.85	141.56	17
6	3-13-56	203	12.40	151.24	17
8	3-28-56	206	14.65	240.94	15
6	4-2-56	215	15.15	195.39	5
7	4-11-56	210	15.00	220.46	9
7	4-19-56	214	15.00	224.96	8
8	5-7-56	215	14.90	256.22	18
8	5-11-56	219	16.25	285.13	4
7	5-24-56	227	16.90	268.65	13
5	6-22-56	*264	15.25	201.26	8
5	6-22-56	*257	15.40	197.85	—
168	**1 year**	**216.32**	**$14.035**	**$5,277.56**	**1-90**

* In the above chart, price knockdowns were made by the packer receiving three shipments. One pig marketed on 2-24-56 weighed only 190 pounds and fell into the Number 2 class. On the marketings for 6-22-56, both groups of hogs had been held over (note the higher weights) in a "gamble" on the market, and they hit a weight that threw them out of the Number 1 price range.

Twelve of the 22 marketings were at the average or higher. Four lots were marketed at prices ranging from 11 to 36 cents per hundred below the average. During the period in question, there were 16 marketings over the $14 per hundred mark, or 72.7 percent of the total.

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NEW TIL-KUT BLADES FIT ANY PLOW

SELF-SHARPENING ACTION. Magnified section shows how blade looks after use. Corrugated edge sharpens itself, cuts trash faster.

The new Lantz Til-Kut blade is now available with center holes to fit all major line plows—IHC, JD, AC, M-H, Case, M-M, Ford, Ferguson, Oliver, Cockshutt, as well as all Lantz Coulters. It cuts heavy stalks and trash with a chewing motion. Til-Kut edge grips from all angles—prevents slippage and plugged plow. You'll get cleaner plowing and better corn borer control. Blades sharpen themselves. Last longer, too, but cost no more than ordinary blades. Write today—use coupon below.

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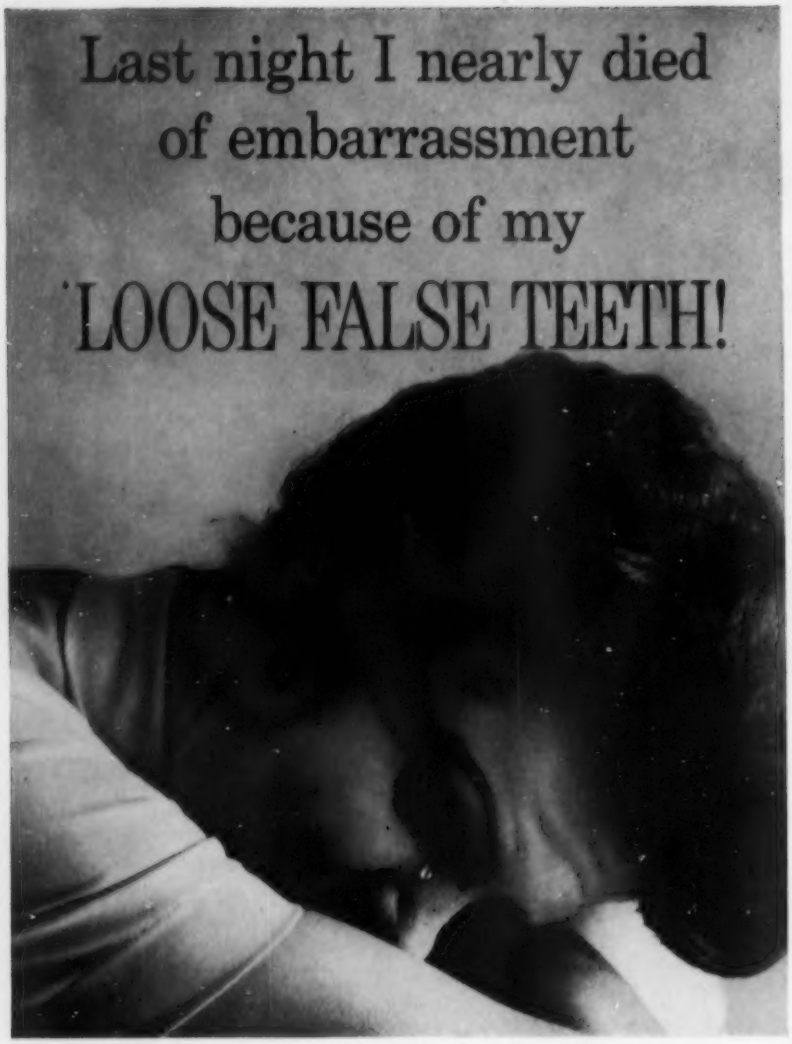


If you have ever felt this way, use amazing new Poli-Grip cream. With Poli-Grip, false teeth fit tight and snug... won't slip or slide!

Pleasant tasting Poli-Grip cream locks slipping, sliding dentures firmly in place, even anchors shallow lowers.

Unlike messy, hit-or-miss powders, Poli-Grip *cream* spreads evenly, smoothly... holds plates tighter, longer.

Snug, Tight-Fitting Comfort
The minute you use Poli-Grip you feel its snug, tight-fitting comfort. Poli-Grip lays a wonderful comfort cushion between plates and tender gums to eliminate the friction that rubs gums sore and raw.

Now you can eat steak, corn-on-the-cob...even bite into sticky taffy...without rocking, wobbling dentures embarrassing you. You can laugh out loud, cough, even sneeze. The fear of your plates dropping away from your gums is gone!

What's more, hot liquids like steaming coffee or hot soup will not melt Poli-Grip cream away as they do weak powders. Poli-Grip grips no matter what!

Start now to enjoy the assurance that comes only when you know your false teeth are locked firmly in place. Try Poli-Grip cream today. At any drug counter. If Poli-Grip doesn't hold your plates tighter, longer than any powders you ever tried, you get *double your money back!*

POLI•GRIP
DENTURE ADHESIVE CREAM

Made and guaranteed by the makers of POLIDENT

Useful hallways

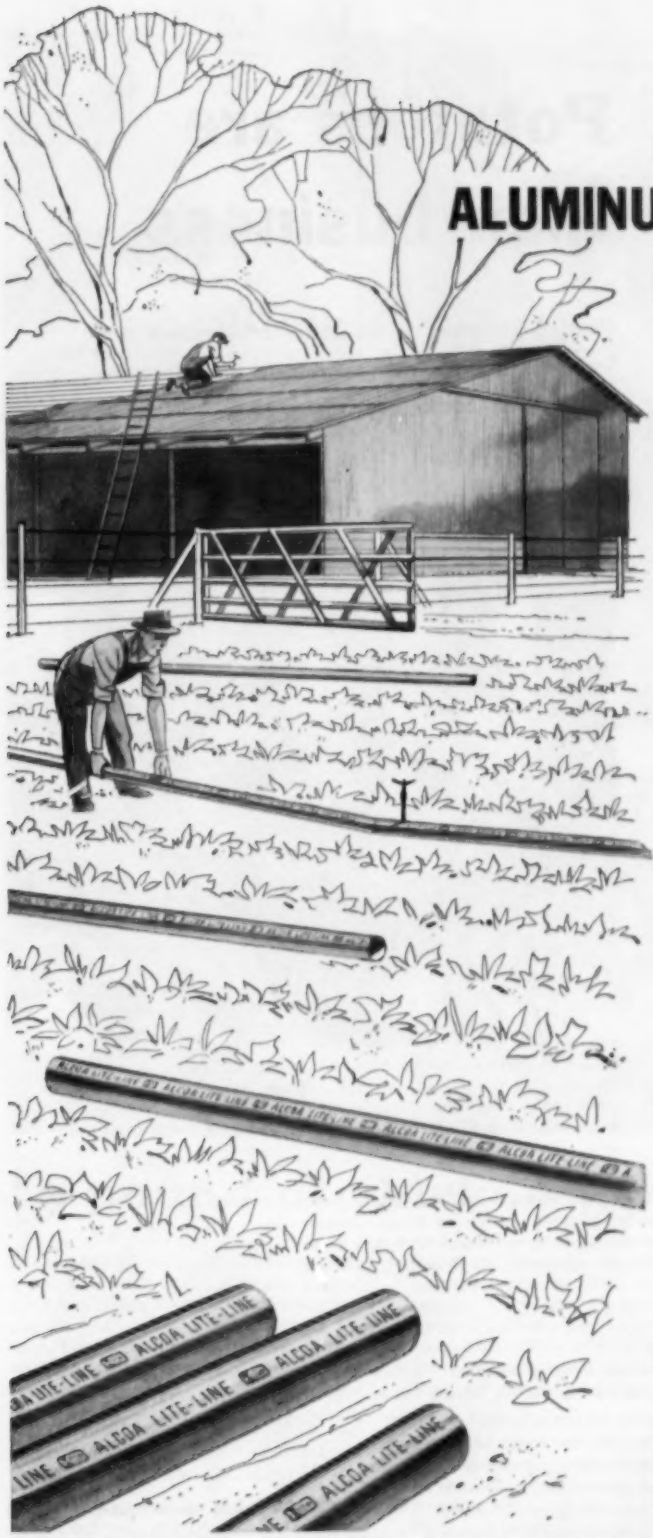
Hallways can be more than just a passageway. In old homes those wide, but not quite room-size, halls can house a world of storage if put to use. Chances are you can easily part with 2 feet of space along one wall to put bookshelves and built-in cabinets that will give you storage for off-season clothes, luggage, camera equipment, sewing materials, and lots of other things that should be kept out of sight. If building a new home, the hallway is a perfect spot to plan for extra cabinets and closets, as it will be handy to all parts of the house.

Photographs: Hopkins, Hedrich-Blessing

A divider between living room and hallway becomes a storage wall in this home. Cabinets at far end are used for storing bedroom and bathroom linens. Center group is for blankets and off-season storage.

Foreground cabinets hold games, records, music, and other items handy to living room and entertainment area in the home.

The Nathan Strawns of Garrison, Iowa, planned for plenty of hall storage in their new farm home. By using less than 2 feet of space along wall, they made room for cabinets for bathroom and bedroom linens, luggage, and miscellaneous items. Storage is handy to bedrooms, bath, as well as office



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Alcoa® Aluminum Irrigation Pipe lets you apply the proper amount of moisture which big crops demand. And Alcoa now offers two lines of pipe: economical new *alclad* Alcoa Lite-Line for normal service and pressures; Alcoa Standard for the toughest service and highest pressures. Alcoa Irrigation Pipe is durable, smooth walled. It's available everywhere.

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Runaway stock means runaway profits, lost time, extra work. Solution:

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- ☐ *Pole Barn Plans Catalog*
- ☐ *Farm Gate details*

Name _____ ☐ Farmer

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Post Office and State _____ ☐ Student

Pretty Ann and Janice Mikkelsen learn early to lend a hand at K.P. duty and also preparing the family dinner. Here Ann tests doneness of home-grown baked potatoes while Janice fixes Cheese-Chive Sauce to serve with them

Potatoes are their business

Raising potatoes at the Elmer Mikkelsens is a family affair. The men plant and harvest them, the women cook them—everyone eats them

By Mary K. Farnen

Photographs: Warren Reynolds, Wittkowski

Mrs. Mikkelsen gives her vote of approval to this delicious Hot Potato Salad. It's a tasty blend of potatoes, eggs, and bacon. This salad can be made ahead and heated through when ready to serve. Better make up a double recipe because it's so good. Men like it, too

Piping-hot potatoes are a welcome addition to any meal. Make a crosscut on top of potato to release steam. Cheese-Chive Sauce adds extra goodness and makes this a truly memorable dish. Or you can serve with big thick pats of butter

There was a hum of activity when we approached the Elmer Mikkelsens' farm home in Clay County, Minnesota. First we were greeted by a 4-H Club sign and then welcomed in to meet the family. In addition to the parents there are 5 girls and 1 boy who in spite of his unique position remains unspoiled.

This is the family that enjoys doing things together. You'll notice a warm feeling of congeniality at all times.

The family has an excellent balance between work and play. They are active in 4-H work and Mrs. Mikkelsen is deeply interested in extension club activities. Billy lends a hand in taking care of the garden and the girls take turns cooking and also enjoy sewing. Besides being interested in the children's activities, Mrs. Mikkelsen finds time to try her hand at some of the crafts. We saw some lovely weaving she'd done with long pine needles.

The Mikkelsens raise wheat, soybeans, and barley—but they also have 120 acres in potatoes. We arrived just in time to see the potato harvest at its peak. We watched the digging, and later saw the potatoes loaded into trucks and hauled to the large underground storage shed. Here they were placed on a conveyer and taken to be stored in the bins until they could be sorted, washed, and waxed.

The Mikkelsens are justly proud of their certified potato production. Potatoes are a favorite food and they find many ways to prepare them. Here you'll see some potato recipes they have tried, liked very much, and think you would enjoy trying.

Cheese Potato Cakes (Makes 6 cakes)

- 2 cups seasoned, mashed potatoes
- 2 tablespoons minced onion
- 2 tablespoons chopped parsley
- 1 beaten egg
- ½ cup shredded Cheddar cheese

Combine all the ingredients and with lightly floured hands form into 6 cakes about ½ inch thick; dip in flour and fry in a small amount of hot fat until golden on both sides.

More recipes on page 148

"a pound of chicken for only *2.16 lbs. of feed*"

"Last April we weighed 100 birds from a batch of 500 Hi Line chicks started on MoorMan's CoxiCurb Mintrate for Chicks and our own corn 8 weeks before. They averaged 2½ pounds apiece, and had eaten 2700 pounds of the starter —an average of 2.16 pounds of feed for a pound of chicken. Our only out-of-pocket cost was for the Mintrate and came to only 7.2c a bird," says Edward Schad, Jr., Olmstead Co., Minn.

Ed Schad's experience is not an unusual one. Last year, out of the tens of thousands of Mintrate users, 3,414 flock owners from 19 states reported their results. They used a starter made of 2 parts of yellow corn (by weight) with 1 part of MoorMan's Chick Mintrate* and produced, on the average, birds weighing 2.36 pounds at 8 weeks.

These were average farm flocks—*not* broilers. They were straight run, sexed pullets and cockerels—68.3% were light breeds—the remaining 31.7% heavy breeds. Approximately 50% of both light and heavy breeds were sexed pullets. The 1,152,115 birds in the 3,414 flocks ate—up to 8 weeks—on the average 5.37 pounds of feed or 2.275 pounds of feed per pound of gain.

If you usually have average success with your chicks you should be able to produce a pound of chicken with about 2¼ pounds of feed—if you make your starter with your own corn and MoorMan's Chick Mintrate. Your MoorMan Man will show you how—or write Moorman Mfg. Co., Dept. R73, Quincy, Ill. for details.

Why Chick Mintrate gave Ed Schad low-cost gains

MoorMan's CoxiCurb* Mintrate is a refined and concentrated combination of: 1) minerals; 2) vitamins A, D, B, plus Vitamin K to protect against hemorrhagic conditions; 3) high quality protein ingredients; 4) antibiotics; 5) a coccidiostat to help prevent coccidiosis. When mixed with corn Mintrate produces a high-energy, low-fiber (less than 3%) ration that helps chicks extract maximum nutritional value from corn and consequently make rapid gains.

MoorMan's*

Since 1885—72 Years of Friendly Service

COXICURB MINTRATE FOR CHICKS

*Trademark Reg. U. S. Pat. Off.

Potatoes are their business

From page 146

Baked Potatoes with Cheese-Chive Sauce (Makes 6 to 8 servings)

- 6 to 8 medium baking potatoes
- 1 8-ounce package cream cheese
- ½ cup light cream
- ½ teaspoon garlic salt
- 1½ teaspoons lemon juice
- 1 tablespoon chopped chives

Scrub potatoes and rub outside with fat. Bake potatoes in hot oven (400°) until tender, about 1 hour. Split slightly to allow steam to escape. Serve with Cheese-Chive Sauce. Soften cheese at room temperature; add cream and beat until blended; beat in garlic salt, lemon juice, and the chives. Serve with baked potato. Makes about 1½ cups of sauce.

Mrs. M's Hot Potato Salad (Makes 5 to 6 servings)

- 4 medium potatoes
- 8 to 10 slices bacon, diced
- 1 medium onion, chopped
- ¼ cup white vinegar
- ¼ cup sugar
- 1 teaspoon salt
- Dash pepper
- 1 cup sour cream
- ½ cup chopped celery
- 3 hard-cooked eggs, sliced

Cook potatoes till tender; drain and slice while still hot. (Makes about 4 cups.) Fry bacon just until crisp; drain and reserve about 2 tablespoons of the fat; add onion and cook till tender, but not brown. Add vinegar, sugar, salt, and pepper. Stir in sour cream. Combine potatoes, celery, and eggs in a 1½-quart casserole and pour dressing over. Cover and bake in a slow oven (300°) 30 minutes.

French Potato Soup (Vichyssoise) (Makes 6 to 8 servings)

- 3 small onions, thinly sliced
- 3 tablespoons butter
- 4 small potatoes, diced
- 4 cups consomme or chicken stock
- 2 cups light cream
- ½ teaspoon salt
- Dash pepper
- 2 tablespoons finely chopped parsley or chives

Cook onions in butter till golden, but not brown. Add potatoes, consomme, cover and cook 40 to 45 minutes till vegetables are tender. Strain through fine sieve; return to heat; stir in cream; season to taste with salt and pepper. Reheat or serve cold. Top with chopped parsley.

Paprika Potatoes (Makes 6 to 8 servings)

- ¼ cup butter
- ½ cup chopped onion
- 2 teaspoons salt
- 1 teaspoon paprika
- Dash pepper
- 6 to 8 medium potatoes, pared and cubed
- ¾ to 1 cup sour cream
- 1 tablespoon chopped parsley

Melt butter in large skillet; add onion and cook until tender but not brown; add salt, paprika, pepper, and potatoes. Cover and cook just till potatoes are tender, about 20 minutes. Add sour cream and mix gently. Simmer about 5 minutes longer. Serve hot. Garnish with parsley.

Prayer for a small boy saying his prayers

If thoughts of bumblebee design
And nibbles on a fishing line
Should intersperse his thoughts of heaven,
Forgive him, Lord—he's only seven.
And many a time his mother's prayers
Are miscellaneous affairs
Whispered as she is moving toward
The kitchen sink or ironing board.
I'm sure You understand while You
Are fashioning stars along a new
Sky meadow on a shoreless way,
And listening to an earth-child pray.

—**Grace V. Watkins**

Philosophic view

The aggregate of stains and mud,
The vestiges of dirt
A six-year-old assembles on
The bosom of his shirt
Once seemed a major tragedy
And days were trouble-spotted
Until I noticed robins' young
Are likewise polka-dotted.

Though still annoyed at son plus shirt
Plus dirt, I never show it,
Hoping that like small robins he'll
Outgrow it.

—**Grace V. Watkins**

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SOLID HARD MAPLE

You'll thrill with pride when you furnish a bedroom with this lovely furniture. Finished in a delightful new color...Cork Tan...it gives the effect of aged wood rubbed with oil.

"Cannon ball" bed posts, "Ogee" feet and heavy solid brass hardware identify the authentic Colonial design of EARLY CENTURY.

The cut-in design in the center drawer fronts of EARLY CENTURY can be found only in *solid* wood furniture. Like "sterling" on silver, the word "solid" on Kling furniture is a distinctive mark of quality. See EARLY CENTURY at your favorite store. You will like it.

Send 25¢ in coin (no stamps, please) for new 24 page booklet, "Ideas for a Lovelier Bedroom", in full color. It is full of ideas on bedroom decoration and arrangement and care of furniture. Kling Factories, Dept. SF3, Mayville, New York.

KLING MEANS SOLID MAPLE • CHERRY • MAHOGANY

Try chicken with dumplings

You can't beat homemade dumplings for real flavor and stick-to-the-ribs goodness. They're practically as necessary as salt and pepper when you're serving stewed chicken or beef stew. And good dumplings are easy to make. Here's how:

Down-on-the-farm Dumplings
(Makes 4 to 5 dumplings)

1 cup sifted flour	½ teaspoon salt
1½ teaspoons baking powder	½ cup milk
	2 tablespoons melted fat

Sift dry ingredients together. Add milk and fat; stir just till flour is moistened. Drop by spoonfuls (see below) onto cooked chicken, meat, or vegetables, but *not* into the boiling liquid. Cover with a tight fitting lid while the dumplings cook.

Photographs: Stanley

Stewed Chicken (Makes 6 servings)

1 4- to 5-pound stewing chicken, disjointed	1 carrot, sliced
½ cup fat	1 slice of onion
2 sprigs parsley	2 teaspoons salt
2 stalks celery	Dash pepper
	1 recipe Dumplings

Brown chicken in hot fat; place in kettle and cover with water. Add remaining ingredients, except Dumplings, cover and simmer till tender (2 to 3 hours). Drop dumplings atop chicken pieces by spoonfuls; cover tightly and steam 20 minutes. Remove chicken and dumplings to platter and thicken gravy with mixture of ½ cup flour and 1 cup milk. When smooth, stir in 4 cups chicken broth and cook till smooth. Season to taste with salt and pepper. Serve over the chicken and dumplings. Garnish with a sprig of parsley.

Entered at State Fair in first year of cooking competition

Missouri Cook Wins 2 Awards in First Competition

Those prize ribbons are the center of attraction as far as Bette and Charles are concerned! And it's no wonder they're so interested . . . their mother, Mrs. Charles Patterson, Jr., won the awards for her cooking skill at last fall's Missouri State Fair.

Mrs. Patterson says that she enjoys cooking, and she enjoys using Fleischmann's Active Dry Yeast, too. "It's so fast and easy," Mrs. Patterson adds. "And so handy—stays fresh right in the cupboard."

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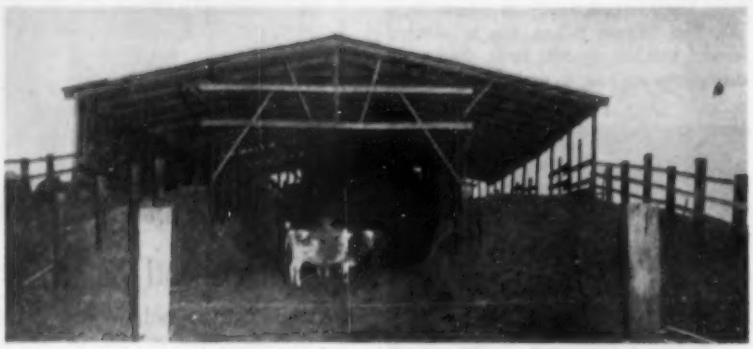
Mend auto seat covers. Cover split seams, tears, with tough, stretchy "SCOTCH" Colored Plastic Tape. Tight-sticking tape is waterproof, washable. Choose red, yellow, green, white, blue, black, brown or clear. ¼" width 25¢—1½" width 50¢—at stores everywhere. Made by Minnesota Mining & Mfg. Co., St. Paul 6, Minnesota. © 3M CO., 1957

Triple-duty barn



Trench silo holds about 500 tons of silage when full. About 350 tons of hay and straw were piled on top of silage but only half the length of the silo was used. The 2 center rows of poles serve as roof supports, the 2 sides of silo, and supports for hay-feeding manger

You've heard of making every acre count. Fred Scheck makes every square foot do multiple duty. Silage and hay are stored 2 deep, space used for resting area

Talk about vertical farming, here's a man who really puts it into practice. Fred Scheck of Upper Sandusky, Ohio, gets the most from every acre and puts every square foot of roof space to maximum use. The term vertical is just another way of describing intensive farming as practiced by Scheck on his Klay Knob Farms. Nearly all of the work is done with family labor.

Last summer Scheck built a new pole feeding shed, 56 by 104 feet. This may not sound unusual, but the way he built it is. It's built astride of a trench silo 26 feet wide, 9 feet deep, and 150 long. The opening of the trench extends 46 feet beyond the roof. After the trench was filled with meadow-crop mixture, he piled round bales of hay and straw on top the silage.

This leaves an aisle down both sides about 13 feet wide. Young stock is kept on one side, milk cows on the other. Silage can be fed from the trench, straw rolled off to bed the stock, and they can eat hay by poking their heads through the plank fence which separates the livestock aisles from the silo-hay-straw center section.

The roof is of corrugated metal and the closed west side is covered with channel drain. One side and the ends are open. Several sections of corrugated glass fiber were substituted in the roof for metal sections to provide skylight. The roof is about 8 feet high at the edges and 15 feet at the peak.

Family help was used mainly in building the pole shed and silo, only $1,200 being spent for hired labor. About 2,000 board feet of lumber and the metal roofing were purchased, with 4,000 board feet of lumber provided from home-grown timber. Another 1,000 feet is being sawed out to finish the job.

There wasn't time to finish the walls of the trench before filling. However, a concrete floor was laid. Precast concrete slabs will be used to wall the trench before it is filled again. Automatic-heated drinking cups were embedded in concrete supports in the feeding aisles.

Part of the silage is being self-fed by use of a "hot" wire across the mouth of the trench. Some is hauled by tractor and trailer to feed bunkers in the loafing area for the milking herd.—*Vernon Schneider.*

Scheck's hay mixture is largely Ranger alfalfa, some Ladino clover, and either brome or orchard grass. He makes hay in an unusual way — all baling at night. Few leaves are lost

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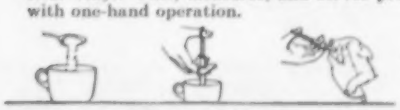

1. Mix 1 teaspoon of Terramycin Animal Formula Powder in 4 teaspoons water for each calf or every 4 pigs or lambs.
2. Fill Terra-Treater with solution by lifting plunger.
3. Squirt dose back of animal's tongue. Repeat daily for 4 days for maximum effectiveness.

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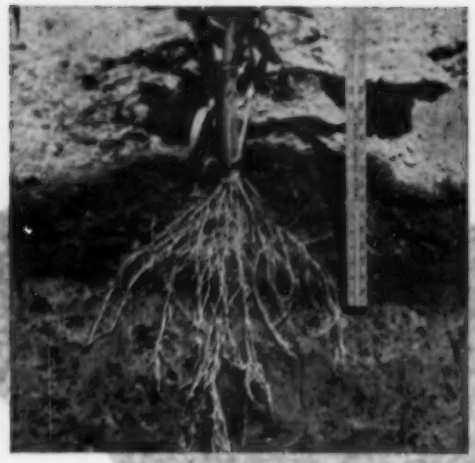

Photos taken at lay-by time on the same farm

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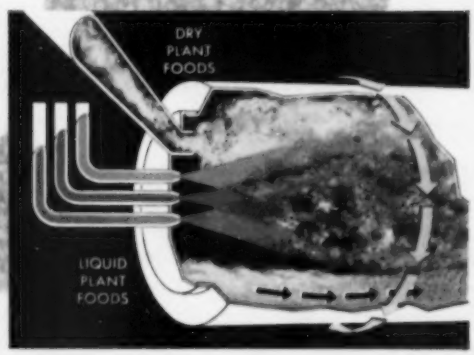

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Swift

102ND YEAR

To Serve Your Farm and Family Better

How to cut losses from

Breeding troubles

Photograph: Savard

Doctor Haller (left) discusses breeding problems with dairyman Harold Stapley, Avon, New York. In a New York State survey, 4 out of 10 cows failed to settle on first service. Each month's delay in breeding means a $45 to $50 loss in production and maintenance

Dr. C. J. Haller reports that one out of four of his calls last year dealt wholly or in part with dairy cow sterility. This Avon, New York, veterinarian says delayed conception means a cow must stand dry and nonproductive when her lactation ceases at a maintenance cost of about $20 per month. When this maintenance cost is added to the $25 or $30 a month loss of income from the cow, it's easy to see why dairymen are asking for assistance to keep their herd breeding problems at a minimum.

Here are the six questions New York dairymen ask most often and Doctor Haller's answers:

1. What are the major causes of breeding troubles?

Poor management practices are most frequently involved, with vibriosis next on the list.

2. What management failures on the part of dairymen show up most often to cause breeding trouble?

(a) Inadequate records and failure to follow these records often allow the cow now showing "heat" to go too long before she is treated.

(b) Cows showing abnormal discharge or retained placenta on calving are bred with slight infection remaining to cause trouble during pregnancy, if it occurs at all.

(c) Dairymen not accustomed to having sterility work done often wait too long before asking for help. The herd breeding efficiency will be very bad and too many good cows not in calf will have to be sacrificed to keep up the milk flow and farm income.

3. How much vibriosis do you find in herds in your area and what can be done about it?

Vibriosis may be a factor in more herds than I suspect, but we seem to be progressing in our fight to stop this disease. I often advise artificial breeding with antibiotic-treated semen even before I can definitely diagnose the condition. Usually it will benefit the production in the herd and stop the spread of vibrio. A sure method of diagnosing vibriosis is desperately needed.

4. Do most dairymen have problem breeders in their herds? If so, should they keep them?

Yes, most dairymen have problem breeders, but often they are also good producers and are kept as long as feasible. When we believe we have discovered a family trait of low fertility, nature is rapidly weeding out this family, and we often do not spend much effort in correcting the fault. However, I have found my clients very eager to have good cows treated year after year if they continue to produce profitably.

I do not believe that my ability to treat sterile cows will ever produce a strain of "slow breeders" of sufficient numbers to be a real threat to dairy cow heredity.

[*Turn to page 154*

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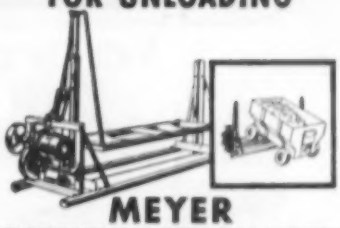

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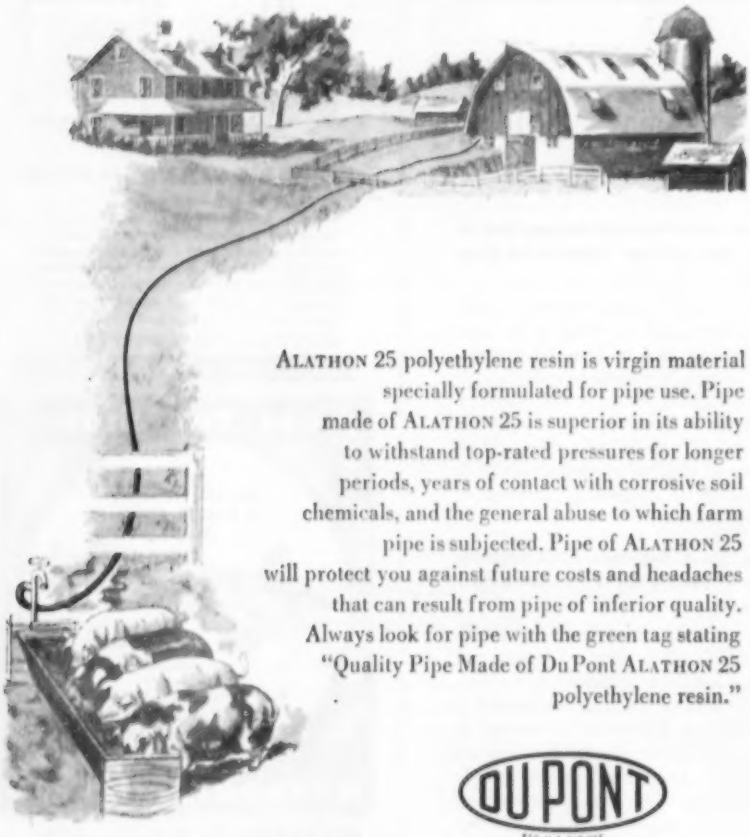

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

There is a difference in flexible plastic pipe...
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Breeding troubles

From page 153

5. What are the major causes of repeat breedings?

(a) Vibriosis. (b) Probable ovulation failure (too late). (c) Infection (endometritis) other than vibriosis. (d) Sterility or low fertility of the herd sire.

6. What suggestions do you give farmers to help them with breeding troubles?

(a) Records and early treatment are foremost in aiding the dairyman and the veterinarian in treating sterility. Establishing the rhythm of heats before it is time to breed a cow often helps in detecting the heat in which service is desirable. (It's important for dairymen to be able to distinguish between the stages of the heat periods. Cows stay in standing heat an average of about 18 hours and the conception rate is highest when cows are bred during the latter half of this stage. Cows that "stand to be ridden" by other cows are in true heat.)

(b) Outward evidence of cystic ovaries can be detected by a good herdsman and the veterinarian's attention can be called to a cow with chronically swollen vulva, relaxed ligaments above the tail set, and so on, thus treating the cow before she has her breeding schedule disrupted.

(c) Dairymen should have all cows with history of or an abnormal discharge following calving, re-examined and treated if necessary before any attempt at breeding.

(d) Exercise and adequate nutrition are essential to good breeding efficiency.

(e) Heifers should be bred when big enough rather than old enough, and should not be allowed to get in too good condition (fat) before breeding. Heifers gaining in condition are more fertile than when they are fat. (Surprisingly enough, you aren't likely to have any more problems with your first-calf heifers than with older cows. These heifers have a little shorter gestation length and are less likely to have twins than older cows, but they are just as likely to conceive.)

(f) Preservice checks of cows with a history of breeding trouble on previous matings often allow time to regulate the cycle and correct the uterine abnormalities before they cause delayed conception. The valuable older cows in the herd probably should be carefully examined by a veterinarian before any attempt at breeding.

Now perhaps you're wondering if you have more problems than most other dairymen. For an idea of how the breeding efficiency of your herd stacks up, compare it with these figures based on a New York State survey:

With 20 cows a dairyman should expect: About 12 to 13 cows requiring only 1 service; about 4 cows requiring 2 services; about 2 cows requiring 3 services; about 1 or 2 cows requiring 4 or more services and then not conceiving. For a 40-cow herd, double these figures.

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Rules for handling anhydrous ammonia

The widespread use of anhydrous ammonia is bringing new safety problems to the farm, says National Safety Council.

The risk to a competent worker using good anhydrous equipment is *small*, but the inexperienced or uninformed operator is faced by some very *real* hazards.

The dangers to workers handling anhydrous ammonia arise largely in the caustic action and the fact that it is contained under pressure—which can be quite high—approximately 200 pounds per square inch gauge at 100 degrees.

A leak or an open valve can throw a jet of caustic liquid a considerable distance. Inhaled in sufficient quantities, the vapors can cause severe injury or death by damage to tissues of the throat, nose, and lungs. And the rapid evaporation of the liquid can cause frostbite to skin and flesh exposed to it. This effect, combined with the caustic action of the ammonia,

[*Turn to page 158*

To keep under control the inherent dangers of this liquefied gas, the National Safety Council recommends these 13 safe-handling rules:

1 Know the characteristics of the gas. At normal temperatures and pressures it is a gas, but under pressure it becomes a liquid. The invisible but pungent ammonia gas is lighter than air, which simplifies ventilation problems. Under normal farm conditions, the fire hazards on the farm are slight.

2 Know your local and state laws regulating the use and storage of anhydrous ammonia.

3 Use equipment designed for anhydrous ammonia. Do not use LP (liquefied petroleum) gas tanks for equipment for handling anhydrous ammonia. Ammonia has a destructive effect on the brass and copper fittings, often used with liquefied petroleum gases. (Highly poisonous fumes may result when liquefied petroleum gas is burned in the presence of an ammonia residue.)

4 Before you use anhydrous ammonia equipment, read your instruction book thoroughly. Make a "dry run" to familiarize yourself with the location of the valves and the proper sequence in which they must be opened and closed.

5 Never permit the liquid level in an anhydrous ammonia tank to exceed the 82-percent-full mark. The dip pipe will warn you. Temperature increases resulting from the direct rays of the sun may cause expansion of the liquid to rupture an overfilled tank.

6 Never tamper with the adjustment on the safety valve.

7 Drain hoses after transferring ammonia. If this is not done, pressure resulting from temperature increases may burst hoses or fittings. (A black rubber hose will absorb heat very rapidly when exposed to the sunlight.)

8 Locate the storage tank away from buildings, fire hazards, and vehicle traffic. Shade it, if possible. Check your local or state regulations for specific rules on location of storage tanks.

9 Keep all equipment in good condition. Rubber hoses and other parts of the system deteriorate with time and weather. Check new equipment very carefully for loose connections, valves, or possible leaks before filling with liquefied ammonia.

10 Keep some ammonia in the tank the year around. This pressure will then prevent entry of air and moisture, thereby reducing corrosion.

11 Never weld directly to the tank, or attempt tank repairs in case of leakage. This is a job for experts.

12 Remember that valves must be closed firmly, but not jammed. Anhydrous ammonia valves, like others, are frequently damaged by the use of excessive force in closing. This results in damaged valve seats and leakage.

13 Be sure all controls on equipment are inaccessible to children and locked.

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5. **Smoother ride**—*two-stage* springs, hydraulic shock absorbers, standard on light-duty models.
6. **Better deal**—from break-in to trade-in.

Whether you choose a stake truck or a pickup, you're sure of bigger payloads and faster, easier loading with a new Studebaker '57 Transtar. Just look at the proof:

Transtar stakes, 1-ton and up, have cargo decks 7½ feet wide—they are *5 bushel baskets wide*—the widest of any truck in the business.

Transtar pickups give you 51½" of *clear* floor space for loading. No wheel wells in the way.

What a saving these advantages mean in trips and loading time! No wonder Studebaker owners make more profit per mile. So could you!

'57 TRANSTAR 1½-TON TRUCK

Here's a heavy-duty truck with a light-duty price tag. Available with 9-ft. or 12-ft. platforms. Wide choice of power, tailored to fit your job. Extra-heavy front axle, auxiliary rear springs and 4-speed Transmission standard. Five-speed direct and overdrive Transmissions at slight extra cost.

Studebaker-Packard
CORPORATION
Where pride of Workmanship comes first!

Handling ammonia

From page 156

can result in severe skin and flesh burns in some cases.

Safety equipment must be considered part of the necessary equipment for transferring gas from one tank to another, and for the operation of an anhydrous ammonia applicator. Have running water or an open tank of water readily accessible to workers who may be exposed to ammonia vapors while transferring it from a stationary storage tank. If an open water tank is used, it should hold at least 55 gallons. Always carry a 5-gallon container filled with water on applicators or portable tanks.

A supply of saturated solution of boric acid should be available for first aid in the event of eye injury or irritation by ammonia. Boric acid solutions are inexpensive, but perishable, and should be replenished at 3-week intervals.

Snug-fitting goggles, which are not vented, should be worn any time ammonia is being transferred. A full-face mask, if available, affords even better protection. Always wear rubber gloves. A sensible precaution is to use rubber rain gear to protect against splashes or sprays of the liquid when disassembling or "bleeding" the anhydrous ammonia handling equipment.

In case of an ammonia burn or injury, your best friend is water used liberally. If it is available, apply vinegar and follow with more water. Wash affected parts thoroughly for at least 10 minutes until they resume normal color. Speedy action is essential!

Remove ammonia-soaked clothing immediately after incident happens.

For eye irritations, wash at length—not less than 20 minutes—in clean water. If it is at hand, use a saturated boric acid solution. Follow the boric acid wash with more clean water. Consult a physician.

For severe nose and throat irritations, rinse the mouth and throat thoroughly with water. Drinking large quantities of water or milk may be helpful. Consult a physician without delay.

Some girls are unmarried for the same reason some drivers run out of gas—they pass too many filling stations looking for their favorite brand.

If a man is overcome by breathing high concentrations of ammonia vapor, carry him to fresh air. Place him face down to facilitate drainage of the respiratory tract. Call a physician immediately. If breathing stops, apply artificial respiration. Keep him comfortable.

Ammonia can be used safely. It does, however, demand respect from those who use it. Know how to use it—use good equipment—and know how to administer first aid in case of accident.

Once you try this new flexible weaning-feeding plan

You'll wonder where the runts went

115 hog farmers report: Wean any time from 3 to 8 weeks with superior results. You'll hold scouring problems to a minimum, get better gains, rebreed sows earlier, and keep sows in better condition.

Wean 'em any time: "We first put some runts on Larro SureStart," says Melvin Lanphar, Leonard, Michigan, Yorkshire breeder. *"In 3 weeks, we wondered where the runts had gone."* New SureStart-SurePig plan permits weaning any time from 3 to 8 weeks . . . grows pigs heavier, faster.

"Easy on sows," says special growers' report of SureStart-SurePig program. That means sows are in prime condition during the critical weeks right after rebreeding — when your next crop of pigs is getting its start.

6 days after weaning! This picture of Lanphar's prize-winning Yorkshire sows was taken just 6 days after pigs were weaned. Note outstanding condition. In less than a week they were wormed, flushed and ready for rebreeding.

Easy to feed. Growers report: "The SureStart-SurePig feeding plan is swell. Small pigs go for it. Grow faster, cheaper. *And no special feeding problems.*" Feeds easily, flows freely in any type of self feeder.

by Steve Carter

NOW wean 'em early or wean 'em late on Larro's SureStart-SurePig plan.

SureStart is a complete starter feed and milk replacer for weaning at 10 lbs. Pigs eat it readily from the 5th day . . . get a growth and health boost. In emergencies, this high level nourishment saves orphan pigs, runts, and pigs on poor-milking sows.

SurePig is fortified with antibiotics, arsanilic acid, vitamins and Larromin mineral blend — including zinc to help prevent Parakeratosis. SurePig helps eliminate runts and produce strong, healthy pigs economically.

For your dealer's name, free pig folder and Swine Record Book, write: Swine Dept., Larro Feeds, General Mills, Minneapolis, Minnesota.

Here's what happened on 115 hog farms

Gains — Better, 68%

Condition of sows at weaning — Better — 64%

Rebreeding — Sooner, 58%

Weaning age — 3rd week, 4%; 4th, 9%; 5th, 15%; 6th, 24%; 7th, 21%; 8th, 27%.

The program — 86% plan to use SureStart again, 96% will use SurePig.

General Mills

Minneapolis 1, Minnesota

Find the runts! Here are Lanphar's pigs 6 days after weaning from sows shown above. Lot includes runts weaned 3 weeks earlier and filled out on SureStart-SurePig feeding plan. Growers using this *flexible* plan say: "It's the best way to start little pigs to a faster gain" . . . "The flexible weaning plan lets me wean anytime I want to and get benefits of modern feeding science" . . . "It helps keep scours away" . . . "Gives me good gains whenever I wean" . . . "Gets my sows to market sooner — in better condition."

"We Bought Our DARI-KOOL With Confidence—

Going DARI-KOOL Assures Us Of Prompt Courteous Service In Years To Come!"

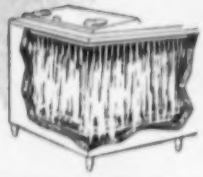
writes MR. & MRS. RALPH PLEUSS, R. 1, Manitowoc, Wis.

We bought our Dari-Kool bulk cooler with confidence since your dealer specializes in milk handling equipment and we were convinced that we'd be given expert installation.

Also, going Dari-Kool insured us of prompt, courteous service in years to come.

We were surprised at the little effort needed to keep our Dari-Kool neat and clean and have been overjoyed with its sparkling beauty.

Sincerely yours, Mr. & Mrs. Ralph Pleuss



DARI-KOOL'S ICE-BANK AND GLACIAL WATERFALL COOLS FASTER, WITHOUT FREEZING

Streams of ice-cold water flood all sides and bottom of the milk tank. Milk is rapidly cooled to below 38° — without freezing the milk.

DARI-KOOL'S ICE-BANK PROTECTS YOUR MILK DURING ELECTRIC POWER FAILURES

In electric power failures the large reserve ice-bank keeps milk cold for many hours. In some coolers, the milk may be lost.

DARI-KOOL TANKS ARE MUCH EASIER TO CLEAN

The refrigerated milk tank walls are always moist. Milk cannot dry and harden. This retards milk stone formation.

DARI-KOOL MEETS OR EXCEEDS ALL 3A STANDARDS

MILK MAY BE POURED OR PIPED TO COOLER

DARI-KOOL

BULK MILK COOLERS®

The ICE-BANK COOLER that outperforms them all!

Model shown 200 gallon Dari-Kool.

Also available in 100, 150, 250, 300, 400, 500, 600 and 700 gallon capacities.

Dari-Kool's fast ice-water cooling assures low blend temperatures, a lower bacteria count and better milk. Dari-Kool does not damage milk by freezing. Get the facts and you'll get a farm-proved, guaranteed Dari-Kool — America's largest selling bulk milk cooler.

DARI-KOOL MEETS ALL 3A STANDARDS

This informative catalog is yours . . . ***FREE!***

Ask your DARI-KOOL dealer today or write

DAIRY EQUIPMENT COMPANY, Dept. 27, Madison, Wis.

Self-feeds from side of

Grass silage stack

Ever wonder how you could self-feed more cattle from your grass-silage stack? Joe Lower and Leroy Vietmeyer of Carroll County, Illinois, have been able to by feeding from the side of their grass-silage stack. Vietmeyer, who operates the farm, self-fed 135 head of Holstein steers last winter. This was done with four 16-foot feeding racks along the side of the stack.

Feeding gates are made with two 2x12 boards along the bottom, a 2x8 at the top, with a 28-inch space between for the cattle to eat through. The 16-foot long gates have 4x4 posts at each end and 5 feet apart along the gate. They are moved as needed, usually 4 or 5 inches a day.

Vietmeyer points out that they have an ideal location for their stacks. A slight rise just outside the cattle yard was bulldozed out, a creosoted plank wall built along the steep sides and an area 80'x68' cemented. Total cost was $1,640.

"I'd rather have it than a silo I put up a few years ago on another farm because it will handle four times as much feed," says Lower.

Barrel feeders on rollers

Poultryman George Barker, Middlesex County, Massachusetts, uses rolling barrel feeders that require weekly filling.

To fill, he hitches a feeder onto an overhead track with a pulley arrangement

and rolls it down the track to the bulk bin. (See picture.) Here the barrel feeder is filled and then rolled back into position. A sloping wooden top keeps birds off the top of the feeder.

Several barrel feeders are used in each pen of poultry.

Sickle Chatter-Gone!

NEW NO-PITMAN MOWER glides THROUGH HAY

(Above) Trail-type for all make tractors.

(Below) Rear-mounted model for Allis-Chalmers tractors with easy-on, easy-off SNAP-COUPLER hitch.

SNAP-COUPLER and TWIN-WHEEL are Allis-Chalmers trademarks.

Just a quiet whirr—that's all you hear. Acres of hay melt away, faster, smoother, cleaner than you've ever seen hay cut before.

TWIN-WHEEL drive makes the difference. The moment you see it in action, you know Allis-Chalmers Engineering-in-Action has made the mower pitman a thing of the past.

Two rotating wheels with balancing counterweights replace the pitman. Regardless of cutter bar angle, driving action is always in the same plane with the sickle.

The new No. 7 Mower really "runs like a watch." That means bigger capacity . . . smoother cut . . . longer life!

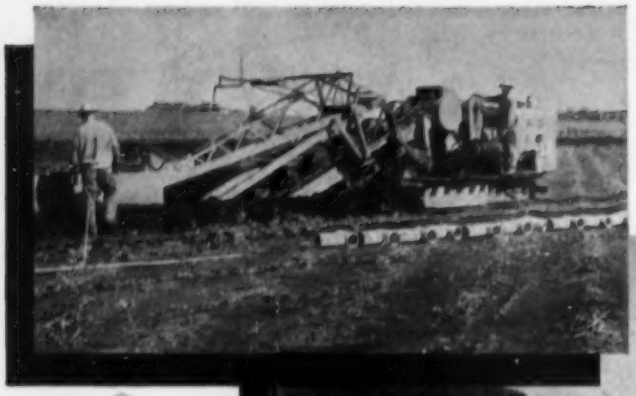
And—you can mow steep banks or ditches—from straight up to 45 degrees below horizontal.

See the mower that's making national news—the great new No. 7—at your Allis-Chalmers dealer's.

ALLIS-CHALMERS, FARM EQUIPMENT DIVISION, MILWAUKEE 1, WISCONSIN

ALLIS-CHALMERS

LISTEN! *National Farm and Home Hour—NBC—Every Saturday*



For draining wet acres

or for

Irrigating dry ones...

Concrete Pipe is Your *Best Buy!*

Draining wet acres improves crop yields, simplifies tillage, allows earlier planting and boosts farm income. Concrete pipe is your best drain tile buy because (1) its true circular shape allows maximum hydraulic capacity, (2) its straight, uniform construction with accurately-cut ends makes it easy to lay and align, (3) its concrete composition assures great strength, unusual durability and long, economical service with little or no upkeep cost.

Concrete tile can carry heavy overburdens and has unusual resistance to cycles of alternate freezing and thawing. Field tests over a 20-year period show that quality concrete tile actually *gained* strength during the testing period.

Irrigating dry acres with a concrete pipe system saves land and money because (1) its installation is underground—allowing maximum productive use of all the land, (2) it eliminates evaporation losses, (3) it provides better control of water distribution, (4) it carries irrigation water over hilly land because the system operates under pressure, (5) it gives long service with little or no maintenance.

Free booklets are available on tile drainage or irrigation with concrete pipe, as well as on many other subjects. Use the handy coupon below.

PASTE COUPON ON BACK OF POSTCARD AND MAIL TODAY

PORTLAND CEMENT ASSOCIATION
Dept. A3-66, 33 W. Grand Ave., Chicago 10, Ill.

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

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Cheap paints may be

Most expensive

Cheap paints may be the most expensive in the long run, says John W. Matthews of the University of Illinois Agricultural Engineering Department.

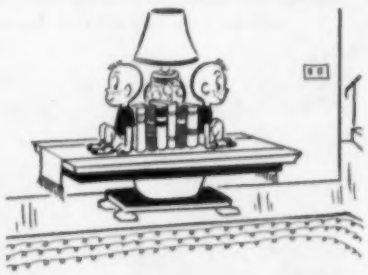
Because cheap paints have poor lasting and spreading qualities, the more expensive high-quality paints are preferable for general and touch-up painting. Paint quality depends on the vehicle and pigments, and their proportions. Linseed oil is one of the best proved vehicles and white lead is standard good-quality pigment. A mixture of zinc oxide, titanium dioxide and white lead makes a cleaner, less chalky, and more durable paint.

For an excellent job and lasting quality, the surface to be painted should be dry, relatively smooth, and clean, Matthews says.

Generally 2 coats are necessary, and on new work 3 are desirable. A primer coat fills up pore space and wets the surface, ensuring a good bond for later coats. The primer should be a special or thinned paint.

The best time to paint is in early summer or fall, when the temperature is above 50 degrees and when weather conditions are stable. Hot weather causes rapid drying and expansion of surface, which cause cracking and scaling. Slow drying results from painting when the temperature is below 50 degrees. This causes stickiness and running together, and insects and dirt may mix in with the paint.

The size of the paint job will probably determine whether you spray or brush paint. Very satisfactory work can be done by spraying, which saves time and labor. However, on rough and porous surfaces, brush painting may be better.



"Mother! Make the twins get out of here."

Plan now for 100 BUSHELS OF CORN PER ACRE

Figure out for yourself what your profit would have been last year, if you had averaged 100 bushels of corn per acre. It *is* possible for you to boost your yield to this figure . . . and more . . . by following a well-balanced soil-fertility program.

Thousands of farmers in your own State have proved to themselves on their own farms that adequate fertilizer properly applied produces more corn and lowers cost per bushel. It's easy to start your own increased-profits program. Your County Agent or Fertilizer Dealer can help you get your soil tested – and he can advise you on fertilizer requirements, proper planting, and good crop management.

Keep informed—attend your local extension meetings.

Bino, The Sinclair Dinosaur, says:

"FERTILIZE FOR GREATER FARM PROFITS"

Manufacturers of Nitrogen Products for Agriculture

SINCLAIR CHEMICALS, INC.

(Affiliate of Sinclair Refining Company)

600 Fifth Avenue, New York 20, N. Y.
155 North Wacker Drive, Chicago 6, Illinois

NEED SCHOOL TRANSPORTATION?
Here it is... the all-new Cushman ROAD KING

Ride it proudly to school—anywhere, everywhere for just ¾ cents per mile. Up to 50 miles per hour, up to 100 miles per gallon.
Ruggedly built with years-ahead body style and two-tone colors. Greater comfort and riding ease. Powered by Cushman Husky 4-cycle engine.

Sold and serviced nationally; replacement parts available immediately

See your Cushman dealer for FREE demonstration ride or write for illustrated literature. Dealer inquiries invited.

Write for new FREE booklet today
CUSHMAN MOTOR WORKS, INC.
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On-time MAINTENANCE MEANS BETTER Performance AND LONGER Life FOR YOUR TRACTOR

HOBBS Engine Hour METERS

Your dealer will tell you that you get better service and avoid unnecessary repair bills when you service powered equipment ON TIME. It pays to know when to change oil, lubricate, overhaul, inspect, etc. . . . and the one sure way is to install a Hobbs Hour Meter. The meter tells you in hours and minutes — not a revolution counter. Easy to read — like your car speedometer. Easy to install — do it yourself in minutes. LOW IN PRICE — see your dealer or write to:

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2059 YALE BLVD. — SPRINGFIELD, ILLINOIS
A Division of Stewart-Warner Corporation

"SURE BEATS THE OLD WAY"
USE ONLY THE ORIGINAL GENUINE
ELASTRATOR
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and ELASTRATOR rings with yellow mark. BLOODLESS deborning, castrating, docking. $12.50. Rings extra: 50, $1.00; 100, $1.80; 500, $7. AT DEALERS or postpaid.
CALIFORNIA STOCKMEN'S SUPPLY CO.
Dept. B-8, 131 Mission St., San Francisco, California

For more fun at your get-together try these

Improvised games

Make sure your get-together is chock full of fun by giving everyone a chance to win at these easy-to-play, improvised games.

For a list of equipment needed and directions for playing, read the legends below each picture. Most of the items needed are in your home.

Try these games at your next party and your friends will have as much fun as this Benson, Minnesota, group. The spirit of competition will run high and your ingenuity will make your party the best ever.

◀ **Egg table tennis** makes use of muffin tin or egg carton, which is being used here. The object of this game is to bounce table-tennis balls into carton. Center rows are worth 10 points; outside rows, 5. Each gets 5 tries

Ring the bottle will challenge the best but it looks easy. To set the stage for game, place two or more pop bottles on the floor, depending on how many are playing the game at one time.

Each player stands at least 5 feet from bottles and throws 5 rings, 1 at a time. A perfect score is 50 points. Each ringer counts 10.

Between bowling requires 3 bottles and 5 tennis balls. Place bottles on floor at least 5 feet from the players. Leave a few inches of space between each bottle.

Players must stay behind a chalk foul line while trying to roll the 5 tennis balls between the bottles. Each ball that does not touch bottles scores 10 points.

Photographs: Pease

Funnel catch is a fast-moving game with a lot depending on how well you can bounce a rubber ball. Ball is thrown to the floor so it bounces off the wall.

The contestant tries to catch the rebound in a funnel held in his other hand. The funnel should be about the size of the ball. Each player gets 5 tries. Each catch is worth 10 points for total of 50.

New bonus-benefit

bifuran

nitrofurazone & furazolidone

in starter feeds

saves chicks from coccidiosis

- • • feeds away coccidiosis problems, helps develop lifetime immunity
- • • fights secondary infections
- • • improves feed conversion

This year there's something new to look for in chick starters . . . it's bifuran. Choose a chick starter with bifuran and you'll eliminate both cecal and intestinal coccidiosis . . . help birds develop immunity that lasts for life.

What's more . . . bifuran goes on to fight vitality-sapping secondary infections that show up throughout a bird's life — infections that weaken chicks and stunt growth. It helps you control infections early to produce more profitable layers.

Speeds chick growth

Bifuran offers another bonus benefit. It improves feed conversion . . . helps chicks make better use of feed. It puts your chicks on the way to becoming better pullets . . . helps them grow faster on less feed, with more vigor — gets them ready to be better layers.

Completely safe . . . non-toxic

As one of the new lifesaving nitrofurans, bifuran is gentle on all birds. It's non-toxic . . . completely safe for all poultry. Can even be fed to layers for lifesaving results. Unlike some medications, bifuran does not harm egg quality, shell texture, hatchability and fertility.

Positive Coccidiosis control

This year don't worry about coccidiosis. Just be sure your chick starter contains bifuran. You'll get sure and safe coccidiosis control — plus other lifesaving bonus benefits.

Ask your feed dealer for a starter feed with bifuran. Check the tag on the feed you buy. *Coccidiosis fighting bifuran appears on the tag as nitrofurazone .0055% and furazolidone .0008%.* Together, these two disease-fighting ingredients are known as bifuran . . . the best coccidiosis protection you can buy in a bag of feed.

YC-7-2

bifuran Appears on the feed tag as nitrofurazone and furazolidone.

One of these Revolutionary nitrofurans

germ killers that last

HESS & CLARK, Inc.

Ashland, Ohio

Connect or uncouple pipe from standing position.

Pushing ends together makes a water-tight seal.

OK CHAMPION
IRRIGATION

Let RAINFALL be SUPPLEMENTAL MOISTURE

Water an acre or square mile—at the right time—in the right amount. Plan your moisture program to the crop—and plan your irrigation system to the moisture schedule your crops need.

An OK Champion portable irrigation system can pay for itself in one year, making extra profits for years afterwards. *Write for Circular Layout Plans.*

CHAMPION CORPORATION • 4777 Sheffield Ave., Hammond, Ind.

Speed your Crop Handling WITH MEYER cost-cutting machines!

NEW MEYER HAY CONDITIONER

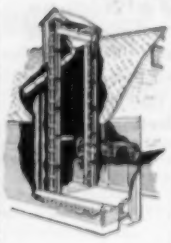
Cuts curing time in half . . . stems dry fast as leaves—remain soft and pliable . . . hay retains color, protein and up to 300% more carotene (Vitamin A). Danger of sun-burning and rain spoilage reduced. LOW PRICED MODELS can be used with your present mower. New Detachable Mower Model—excells all others.

MEYER PORTABLE ELEVATORS

Get the Most for your Money with famous MEYER portables.

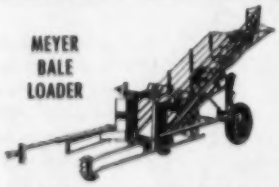
3 sizes—10", 18" and 20". Maximum capacity. Galvanized steel sections . . . heavy-duty double steel chain. Roller bearings throughout. Conveyor (hopper or bale chute optional).

MEYER BUCKET ELEVATORS



Costs less to own . . . maintain . . . operate! Handles 50 bu. corn or small grain in 3 min. Smooth running, bind-free design—no short curves. Anti-friction bearings . . . malleable or roller chain. Choose from 7 styles.

MEYER BALE LOADER



Low cost labor saver! Loads 75 bales in 15 minutes—worth 2 men! Picks up bales as dropped . . . ground driven, light draft, easily hitched. Two bale deck heights.

THIS COUPON WILL SAVE YOU MONEY!

Mail *today*—for folders and prices on the MEYER equipment you need for cost-cutting farming methods!

MEYER MFG. CO.
MORTON, ILLINOIS

MEYER MFG. CO.
Box 3660, Morton, Illinois

At no cost or obligation to me, rush facts on the following MEYER equipment:

☐ Meyer Hay Conditioner ☐ Meyer Bucket Elevators
☐ Meyer Portable Elevators ☐ Meyer Bale Loader

Name_____
Address_____
Town_____ State_____

MAKERS OF FAMOUS MEYER ELEVATORS

Sow, seed, pack

—*one operation*

Photograph: Thompson

A young Iowa farmer, Sven Storm of Linn County, used a bit of ingenuity to speed up his spring farming operations and yet keep costs down.

This was his solution: He used an old cultipacker and mounted a power take-off chain seeder on it. The 8-inch seeder drops were set just ahead of the rear row of packing wheels.

This unit was attached behind a PTO drive fertilizer spreader, hitched to the tractor drawbar.

The tractor PTO was hooked to the spreader. A telescoping shaft was attached to the rear of the spreader drive and to the seeder behind it.

After discing, Sven sowed oats, seeded alfalfa and clover, and packed the seedbed in one operation.

Best lamb grain-roughage ratio

Fattening lambs gain faster and more efficiently when their rations contain 45-percent concentrates and 55-percent roughage, tests at Kansas State College show.

Lambs getting that balance of concentrates to roughage gained most per 100 pounds of total digestible nutrients (TDN) in every one of 9 experiments. Second best ratio was 55-percent concentrates and 45-percent roughage but it was consistently less efficient. Other ratios, such as 35-percent concentrates to 65-percent roughage, were even less efficient.

Fed corn, cottonseed meal, alfalfa hay, and sorghum silage, lambs getting the 45-55 ratio of concentrates to roughage made .36 pound daily gain each compared with .32 pound each for those on the same feeds in a 55-45 ratio.

Fed corn, soybean meal, alfalfa hay and sorghum silage, lambs on the 45-55 ratio gained .38 pound each daily compared with .35 pound for those on the 55-45 ratio.

When corn and alfalfa were the total feeds, the 45-55 ratio produced .39 pound daily gain compared with .36 for the 55-45 ratio.

Nearly 2000 franchised Purina Check-R-Mix Dealers now use Purina's exclusive ration-mixing brain . . . the CHECK-R-MIXER.

Ask your Check-R-Mix Dealer to show you how you, yourself, can dial your own Purina Research-Approved rations from your grain.

from 60-bu. corn land . . .

You can get up to 13,440 lbs. milk per acre!

Sixty bushels of corn, Check-R-Mixed with the right amount of Purina Cow Chow Concentrate, can make an "acre of milk" worth up to 5½ times the market price of corn alone!

If you have good cows and hay, and can raise "60-Bushel Corn," your Purina Check-R-Mix Dealer (Purina-approved grinding and mixing service) can show you how to produce 13,440 lbs. milk (or more) to the acre . . . worth up to 5½ times as much as your corn alone!

Good corn and Purina Cow Chow Concentrate,* mixed and ground by an approved Purina Check-R-Mix Dealer, make a ration which year-in and year-out helps thousands of cows produce 3 lbs. of milk to a pound of feed (plus roughage) and maintain condition, good health and regular breeding.

Your out-of-pocket costs for Cow Chow Concentrate and Check-R-Mix grinding-mixing service represent only a small fraction of the added labor income you receive when you sell your corn through cows the Check-R-Mix way. Call your Check-R-Mix Dealer for details.

**Add Purina Bulky-Las for cow appeal and extra body-building nutrients.*

CHECK-R-MIX

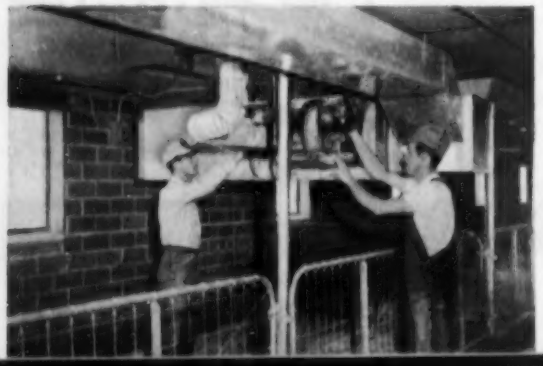
YOU CAN DEPEND ON PURINA-APPROVED GRINDING AND MIXING SERVICE

They built a farrowing house with an eye on the future

Manure is elevated from gutter cleaner to manure spreader. The house is of double-wall construction. Outer wall is brick, the inner wall is glazed tile. The 3-inch space between is filled with an insulating mixture of vermiculite and concrete

Photographs: Naylor

Gutter for barn cleaner extends along edges of pens on each side and alleyway down the middle. Litter is scraped from the pens into gutter. All electric wiring is in metal conduits and there are electric outlets for heat lamps in each pen. The insulated windows in farrowing house are double-pane



Heating unit is an oil-burning, hot-air furnace mounted on ceiling about the center of the building. The heat ducts extend from both sides of the furnace and nearly full length of the building. The ventilation system consists of 4 exhaust fans, 4 thermostats and 14 fresh-air intakes. A 55-degree temperature is held in winter

By B. G. Thrailkill

The Hamilton Brothers, Robert and William, Iowa Falls, Iowa, aren't the least bit worried about investing $16,500 in a new farrowing house in the face of lower prices for farm products and rising costs of production.

They're willing to *spend money for housing and equipment that will cut production costs* and they are confident their new farrowing house will help do it. Let's take a look at the house and see why.

The 24x124-foot structure is fully insulated. It has automatic heat, ventilation and watering facilities, plus an electrically operated barn cleaner, overhead storage of feed, bedding, and equipment (see pictures below).

The house is designed to save time and labor, simplify sanitation problems, and provide a comfortable place for the pigs.

When the 34 farrowing pens in the house are filled with sows and pigs, cleaning the pens and feeding the hogs requires only about 35 minutes' time.

The Hamiltons plan to produce 1,200 market hogs a year in 4 farrowings to spread the marketing. They will have 2 groups of sows—37 in each group to assure having 34 to farrow—and each group [*Turn to page 170*

Each pen has a farrowing stall made of metal partitions hinged to the wall and held together at the other end by chains. Partitions can be swung aside to form creep feeders for the baby pigs. When not in use, stalls are stored in the attic. Floors under the farrowing pens are insulated with a 4-inch layer of vermiculite-concrete

You're the BIG ONE in this picture!

One farm worker now supports 19 other persons!

(U.S.D.A. STATISTIC)

When the United States Department of Agriculture says that one farm worker supports . . . feeds and clothes . . . 19 other persons, it dramatically emphasizes the importance of the individual farm worker to his fellow Americans!

To support this many people, the farm worker must use mechanized farm equipment — cars, trucks, tractors, power implements and stationary engines — that are well maintained for maximum production and efficient operation!

So, follow the manufacturer's advice on the upkeep of all farm machinery, including the changing of spark plugs. When you do replace them, be sure to use AC Hot Tip Spark Plugs . . . they heat up fast to burn away fouling oil and carbon deposits as soon as they form. The AC "Hot Tips" give you fast starts, smooth operation and full horsepower throughout a long lifetime.

Get AC Hot Tip Spark Plugs from your nearby AC retailer.

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SCHWARTZ MFG. CO., Two Rivers, Wis.

Perfect Answer for Farm Group Program Committees

"How to Save More Pigs," a film strip with 10-page commentary has been prepared by Successful Farming for sale at $2.25. Write Successful Farming, Des Moines 3, Iowa.

Built a farrowing house

From page 168

of sows will farrow twice a year. All pigs will be farrowed indoors.

The Hamiltons plan to build concrete feeding floors on either side of the farrowing house and, in addition will use an old barn for winter feeding.

All feeding is in accordance with the prestarter and grower rations developed by Dr. Damon Catron, swine nutrition researcher at Iowa State College. The Hamiltons have the ration mixed and ground at a nearby feed mill.

The prestarter ration is fed for the first 5 weeks of the pigs' life, then they are switched to the grower ration. They are weaned at 4 weeks of age.

The pigs are marketed at an average weight of 215 pounds at 5 months of age.

The hog enterprise is on the farm operated by Robert. William devotes his time to managing a herd of 50 Holsteins.

The idea for streamlining the hog project came after they modernized the dairy setup by converting an old barn into a loafing pen, building a milking parlor, and installing a direct pipeline and bulk milk handling system.

It paid off handsomely. That's where the money came from to build the farrowing house.

Overhead storage provides an easy-to-get-to place to store metal pen partitions, windows, and other pieces of equipment—keeps them from getting banged around. Overhead trap door is easily opened, closed

Metal sheeting breaks wind

One sheet of metal roofing tacked on the north side of their grain and mineral feeder protects animals against rain and snow on the John and Nicky Iman farm, Saline County, Missouri.

The metal roof has an overhang of 18 inches and no flakes drifted in during a snowstorm. The Imans plan to reinforce the roof with a strip near the outer edge of the overhang to take out the sag.

The windbreak is temporary and can be removed after the winter season or if more space is needed at the bunk.

*Trade-mark of Monsanto Chemical Company

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A Gentle Dig

Girl: "It always makes a hit with Father when my boy friends help him a little with the garden."
Boy: "Well, you can tell your father I'm not a hoe-beau."

Infectious Gratitude

The old man who owned the hotel showed the teachers a plague he had received from President Eisenhower.—Wichita (Kansas) Beacon.

Splitting Hairs

A barber was telling a customer about the way he and his brother operated the shop.

"Do you two divide both the work and the profits on a 50-50 basis?" the customer asked.

"Yes, we do," the barber replied. "We shear and share alike."

A Safe Enough Age

Also, girls there (in small towns) started dating at the age of 14½ which is more than half a year earlier than for city girls.—Dickinson (North Dakota) Press

The Silver Lining

An optimist and a pessimist were shipwrecked in the South Pacific, and after several days their raft came within sight of a tropic island.

The pessimist, expecting the worst, said to his companion, "It's a rough-looking place. I'll bet it's inhabited by wild men."

But the optimist was more cheerful, saying, "Cheer up, pal. Where there are wild men there usually are wild women."

Should We Liquid-ate Them?

There is no real saturation point in the automobile market—but there is in some drivers.—Herbert Victor.

A Rest Will Help Him

1st Hoodlum: "I just saw Jake and he had a pinched look on his face."
2nd Hoodlum: "Sick, is he?"
1st Hoodlum: "No, he was walking with a policeman on each side."

The Legal Fact

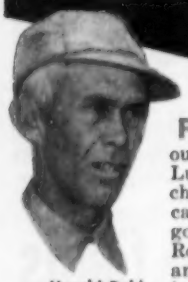
A quite wealthy old lady, who was desperately ill, sent for her lawyer to make her will.

"I wish to explain about the disposition of my property," she said weakly.

"Now don't you worry about it," the lawyer replied with sympathetic tone. "You just leave everything to me."

With a resigned air the old woman whispered, "That's right, I might as well. You'll get most of it anyway."

Lundell Cut Silage proven SUPERIOR by


Harold Rold, Harlan, Iowa

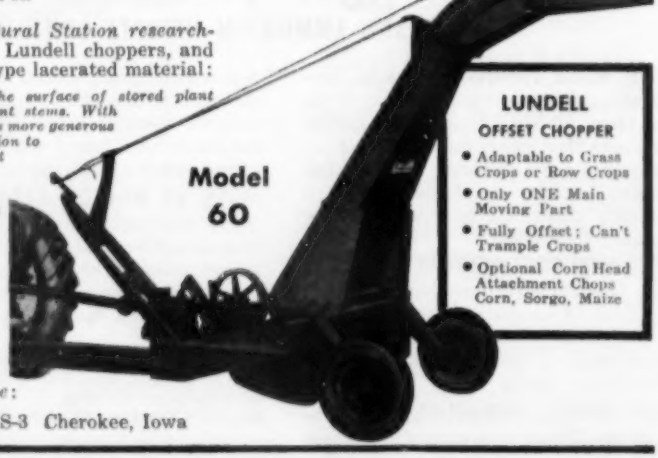
FARMERS *"It packs and seals better,* and does not dry out," says Harold Rold, Harlan, Iowa, farmer-feeder of his Lundell cut silage. In '57, he will feed 2000 tons of Lundell-chopped alfalfa and mixed grasses to put cheap gains on 300 cattle. "I make full use of my Lundell chopper to produce good silage. The cattle like it and it handles well," he states. Rold recommends a Lundell machine as good drought insurance. "With it you can harvest any type grass crop, including weeds," he declares, "and I've done it."

AG. COLLEGES *Iowa Agricultural Station researchers* recently tested flail type harvesters, including Lundell choppers, and here is a summary of their report on the Lundell-type lacerated material:

"It is commonly accepted that fermentation develops on the surface of stored plant materials. The juices flow from the severed ends of the plant stems. With square-cut materials, only the ends of the stems bleed. The flow is more generous from shredded and lacerated materials. This permits fermentation to begin sooner. And, prompt fermentation limits the development of undesirable molds and bacteria.

"In studies of forage crop treatment for silage it was observed that shredded crops seemed to pack more easily into miniature silos. In their opinion, there was also obvious visual difference between the shredded and chopped materials.

"In laboratory studies, shredded silage was found to have a lower pH than chopped silage, and low pH is very desirable. Less seepage also occurred from shredded than from chopped silage under laboratory conditions."



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OFFSET CHOPPER
- Adaptable to Grass Crops or Row Crops
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Vaccinate!

Your neighbor's vaccination won't save your pigs...

Peace of mind, against the constant threat of hog cholera, can be yours only when *your own* pigs are immune. Today's farm traffic and visiting carry too many risks of exposure to gamble your pigs on the safety of your neighborhood. Again this season, have your pigs vaccinated. Follow the professional advice of your veterinarian, and be safe!

M·L·V, the original modified live virus vaccine, is now in its 6th year of successful use on many millions of swine. M·L·V and serum, used simultaneously as recommended, establish immediate protection and immunity which usually is maintained throughout the lifetime of market hogs. M·L·V is patented and produced by the world's largest exclusive producer of veterinary biologicals and pharmaceuticals. Fort Dodge Laboratories, Inc., Fort Dodge, Iowa.

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the *original*
Modified Live Virus Hog Cholera Vaccine

CONSULT YOUR VETERINARIAN
he knows best, what's best

You still pay these "temporary" wartime taxes

During World War II, Congress levied special taxes on the passenger fares and freight charges paid to railroads and other forms of public for-hire transportation. One reason for these special taxes was to discourage the use of these transportation facilities in wartime.

The war ended more than ten years ago but these taxes go on – and on. They still add an extra 10 per cent to the passenger fares you pay, and they add 3 per cent to the freight charges on everything that moves by public carriers such as railroads.

The reason for these "temporary" wartime taxes vanished long ago. But they are still discouraging the use of our public transportation systems. And by so doing, these taxes are weakening our public carriers—essential to peacetime commerce and vital to national defense.

These discriminatory and burdensome taxes should be repealed – *now!*

ASSOCIATION OF
AMERICAN RAILROADS
WASHINGTON, D. C.

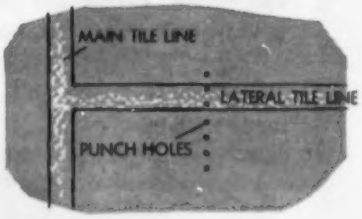
How to find

By Ken Hadenfeldt

This simple device is handy to have ready when trouble develops in your farm tile-drainage system. It is also useful in finding sewage disposal lines or the exact location of the septic tank.

It is not a "witching device" but instead, is designed to be forced into the ground at a location which is known to be near the tile or sewer line—then by moving in one direction and forcing the rod down at 4″ to 6″ spacings—the line can be struck with the tip of the rod, thus

Photographs: Author



To use probe of this length, carry container of water with you and as soil becomes difficult to push probe through, use water to soften soil and decrease friction on sides. Locate tile by punching holes as shown in drawing across known direction of tile line

field tile

determining where to dig. By knowing the direction in which tile lines are running, you can quickly locate them by punching down, in a crosswise direction to the line, as shown in the drawing at bottom of opposite page.

The device is simple to construct in the average farm shop. Cut a 10″ length of ¾″ pipe for the handle and braze or weld in place, as shown in the photographs. Use a 6′ length of ⅜″ steel rod for the main part of the tool but a longer rod if tile lines are deeper than this.

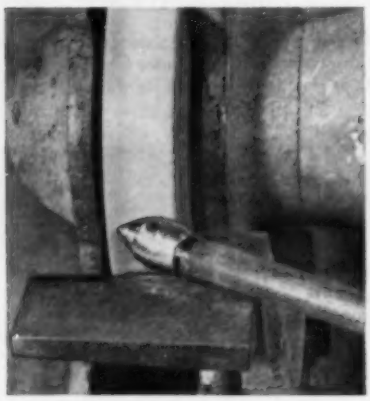
The design of the point is important in getting the rod to go down in heavy soils. It has a larger diameter than the rod itself so it will open a larger space ahead of the rod and lessen friction on the sides of the rod as it is forced down.

The point is built up to a larger diameter than needed by welding or brazing, then ground on a grinder to improve the shape and get the entire point smooth. For example, with a ⅜″ rod, it would be desirable to have a finished point with a diameter of ½″ to 9/16″. The total length of the point need not be more than ¾″ to 1″.

When using the rod in heavy soil, I carry a container of water. After starting the rod, I remove it to pour a small amount of water in the hole and do this alternately until the rod is down. The rod goes down easier because the soil is moist and friction on the rod is decreased.

We have used this device satisfactorily on our farm for about 7 years.

Important thing to keep in mind when building the probe is to make it work easily even when pushed to depths as much as 10′. Secret is to make tip slightly larger than the rest of rod. Then the hole will not cause too much friction on the rod. Grinding tip off smooth helps in pushing rod through soil ▼



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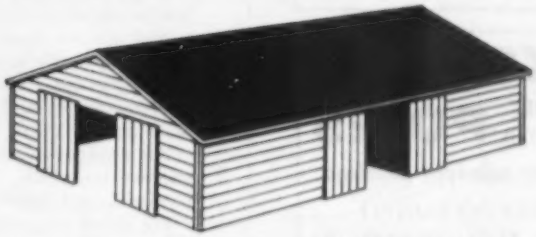

FROM YOUR RETAIL LUMBER DEALER!

Designed by the agricultural engineering department of Michigan State university, these buildings feature *clear-spans* of 24, 30, 36 and 40 feet. They are easy to construct, and, built of sturdy West Coast lumber, will give years of low-cost shelter for livestock, machinery, or crops. The basic building can be adapted to many uses by varying door and window locations, while the length is limited only by your demands.

Check ✓ these advantages

✓ **VERSATILITY.** You get the building you want, tailored to your special requirements. You have a choice of any one of four clear-span widths.

✓ **ADAPTABILITY.** The four widths (24, 30, 36 and 40 feet) are adaptable to any length or type of building, can be altered as your needs change.

✓ **EASE AND SPEED OF ERECTION.** Whether you build it yourself or contract, you'll find it goes up easily . . . and quickly.

✓ **THE BONUS OF WOOD.** Ease-of-handling, economy, high insulation values, and the dependability of wood construction have long been known to agricultural engineers. Now they're all combined in a packaged farm building.

Douglas Fir
West Coast Hemlock
Western Red Cedar
Sitka Spruce

Ask your dealer about these versatile buildings available in 24′, 30′, 36′ and 40′ clear-span widths (and any length), or write . . .

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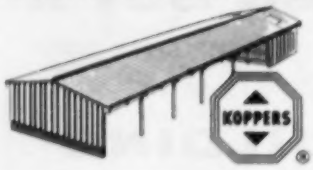
SAVE UP TO 50% of Costs with POLE-TYPE FARM BUILDINGS



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Want a low-cost building?
Details on 12 efficient, low-cost, pole-type farm buildings you can erect yourself. Yours free.

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Compressed air bargain for busy farmers . . . for tires . . . grease guns . . . blow guns . . . spray painting. At a price that will tempt you!

air for work anywhere

Detach tank for fast action in emergency . . . a flat tire in the farthest field. Tank attached . . . performs like any other tank compressor. ¼ HP Rugged heavy duty . . . motor . . . 10-gal. stainless steel tank. *Indispensable farm tool.* Write 205 Railroad Ave., Harrison, Ohio.

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NEW! . . . DO IT YOURSELF!

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FEED BUNK KIT

LOW COST—Because you use your own lumber, assemble it yourself in a matter of minutes. Lasts longer.
LESS WASTE—Because feed rolls to center, and is not rooted over sides.
HOLDS MORE—13" deep, 40" wide.
EASIER—Simply lay 14 two-by-fours in semi-circular leg frames, slip in the end plates and tighten 8 clamps. Four 4 by 4's are bolted to leg frames. NO NAILS OR BOLTS IN TROUGH.

For Full Details Write

TATGE CHEMICAL CO.
Box 190 Herington, Kansas

To control fire, choose best tool

Putting out a fire with the least damage depends on how early you discover it and how quickly you act with the most effective fire-fighting equipment.

And whether or not you have the most effective portable extinguisher depends on its contents—water or other extinguishing agent—and what it is that's burning.

For example, water is ordinarily not effective in fighting fires in flammable liquids. In fact, it may spread the fire.

For this reason, fires are classified according to the way in which they can best be extinguished in their early stages.

Type	Class A Wood, paper textile, rubbish	Class B Flammables, oil, paints	Class C Electrical appliances, motors
Pump-tank	X		
Soda-acid	X		
Foam	X	X	
Vaporizing		X	X
Dry chemical			X
Carbon-dioxide			X

Pump-tank type uses either plain water or a nonfreezing solution of calcium chloride. This extinguishing agent puts out the fire by cooling it. The tank comes in two principal sizes—2½ and 5 gallons—and it is equipped with a pump for throwing the liquid 30 to 40 feet.

Buckets should be hung in handy positions for use in carrying water, sand, or dirt to help extinguish the fire.

Soda-acid type extinguisher is designed to be hung on the wall. The most common size is 2½ gallons. To use, turn extinguisher upside down from the position in which it hangs on wall. This causes the soda solution to mix with acid-forming carbon-dioxide gas. The pressure expels the solution through the hose with sufficient force to throw a soda-acid stream 30 to 40 feet. Flow continues for about one minute.

Foam-type extinguishers are another type of chemical fire-fighting equipment. When turned upside down, carbon-dioxide gas expels from the extinguisher a foam of countless small bubbles. This smothers the fire by clinging to the burning material and excluding the air. After applying foam, make sure fire has been extinguished.

Dry-chemical type extinguishers are most effective on fires of flammable liquids and in electrical equipment. Hand units holding 15 to 30 pounds are available.

Chemical which is most commonly used consists of finely ground bicarbonate of soda which has been mixed with other ingredients to prevent caking. The mixture can be bought in bulk to refill the extinguisher at the scene of the fire. Mixture is not damaged by extremes of heat, cold, or moisture.

The chemical is expelled from extinguishers by pressure from a carbon-dioxide cartridge. Since a new cartridge is required at each powder refill, they should be stocked and weighed annually as a check against leaks.

Vaporizing liquid pump-gun type uses carbon tetrachloride which has been specially treated to lower the freezing point, and to prevent corrosion.

In using these extinguishers, especially if in unventilated places like small rooms or closets, care should be taken to avoid as much as practicable the breathing of the vapors or gases that are produced.

This type of extinguisher should be partially discharged and refilled each year. No liquid except that furnished by the manufacturer should be used.

Carbon-dioxide type extinguisher contains carbon dioxide under high pressure. It cannot be recharged on the spot. Apply the discharge as close to the fire as possible. These extinguishers are suitable for fires in electrical equipment if provided with horns of a nonconductive material; can also be used on small flammable liquid fires.

Approved extinguishers carry the label of the Underwriters' Laboratories and/or the Factory Mutual Laboratories.

Wear's worst enemy!
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World-famous Mobiloil—helps assure longer engine life . . . smooth, quiet operation . . . maximum fuel and oil economy. Because Mobiloil is a super-detergent, heavy duty motor oil, it fights corrosion . . . helps prevent deposits . . . protects in cold weather and warm. Why accept less for your farm engine?
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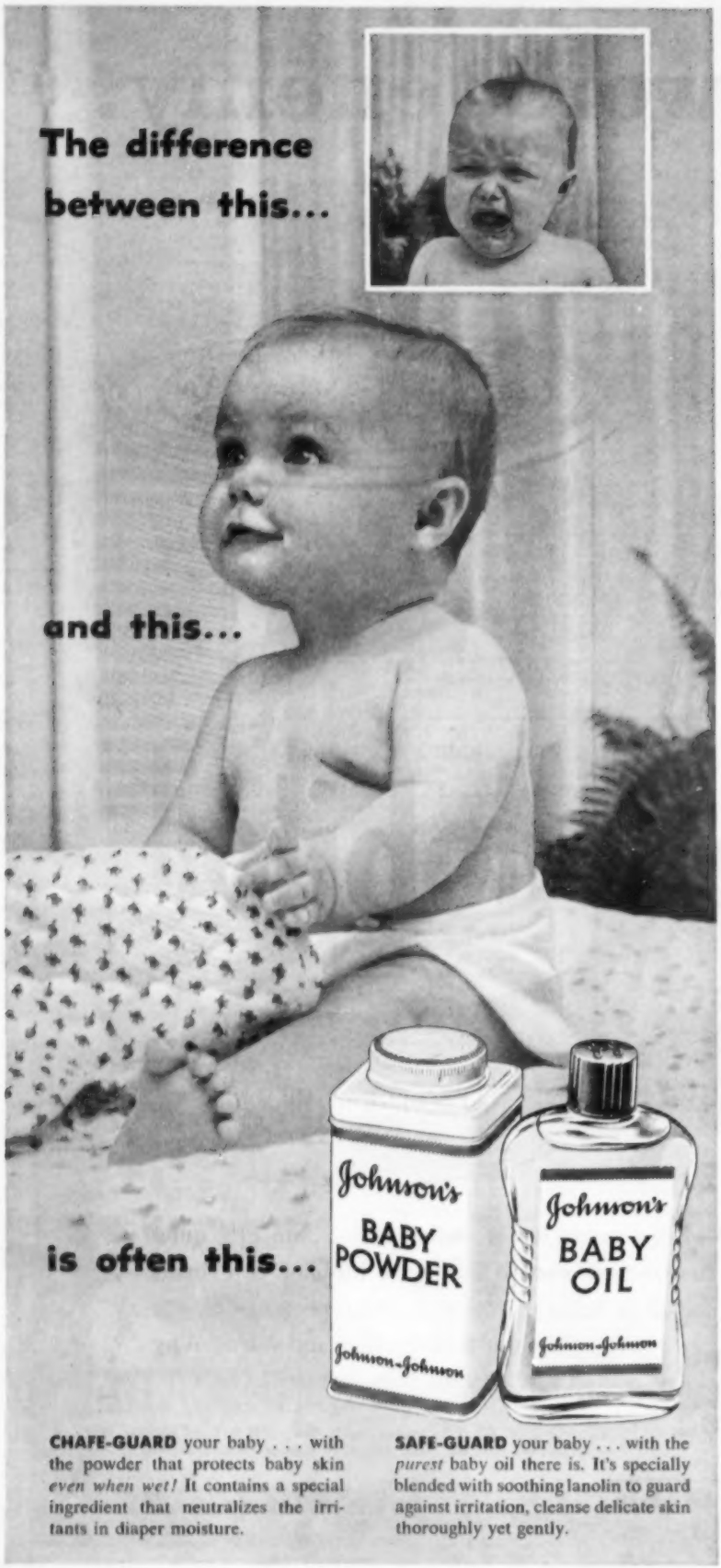
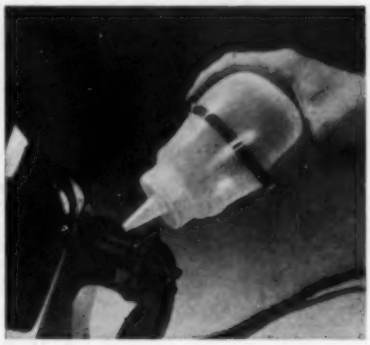


CHAFE-GUARD your baby . . . with the powder that protects baby skin *even when wet!* It contains a special ingredient that neutralizes the irritants in diaper moisture.

SAFE-GUARD your baby . . . with the *purest* baby oil there is. It's specially blended with soothing lanolin to guard against irritation, cleanse delicate skin thoroughly yet gently.

All around

Here are tips to help you save time, steps, space, and work



● **Handy way to fill steam irons without spilling water. Keep a plastic mustard or catsup squeeze dispenser filled with distilled water. So easy to handle, too. You could mark your iron's capacity on the dispenser with colored cellophane tape.—*Mrs. H. R. Sommer, Nebraska.***

● To paint bottom side of cupboard shelves without standing on your head, use an old mirror. Place mirror on shelf below one you're painting. Look in mirror to see where to paint.—*Miss Cora Dieterich, Ohio.*

● **To make meat balls uniform in size, pat the ground beef into a flat cake and cut with ice cube tray divider. Makes just the right size balls when rolled.—*Mrs. William Mitchell, Indiana.***

● Open seed packets and boxes at the bottom. If you don't plant all the seeds you can still read the name.—*Helen D. Peterson, Wisconsin.*

● **I always tear a paper sack, no matter how small, from top to bottom before destroying it. This way I've saved many articles which otherwise would have been accidentally thrown away.—*Mrs. Glenn Stoll, Kansas.***

● When you have several teen-agers in the family it's hard to get all jeans back to their rightful owners after washday. With a black crayon I write the owner's name on an inside white pocket, then press with a warm iron. This will withstand many washings.—*Mrs. Ernest Miller, Michigan.*

● **Use the brush from a discarded fingernail polish bottle for painting numbers on milk cans or names on mailboxes. Makes a neat, even line.—*Mrs. Eugene Marq, Minnesota.***

● Portable hotbed. Fill your child's old wagon with soil, plant seeds, and cover with glass. You can move wagon to catch lots of sun, pull to flower bed at transplanting time.—*Laura Schott, Iowa.*

the house®

● When you're getting homemade butter ready for storage, pack it in a square or rectangular cake pan and cut into serving pieces before chilling. These cubes may be wrapped in freezer paper or aluminum foil and stored for 3 months in your freezer.—*Mrs. Neil Beitelspacher, North Dakota.*

● Lay your table-protector pad on your table with the felt side up when you're cutting fabric. Keeps material from slipping. Put one of the pads on your sewing machine to keep articles from sliding around as you sew. This is especially good when working with nylon.—*Lucille Kroenlein, Illinois.*

● Save steps. Keep an extra set of plastic measuring spoons in the medicine cabinet to measure varied amounts of dry or liquid medicines. Easily rinsed out, won't stain or tarnish.—*Mrs. Louis Ward, Iowa.*

● If you have difficulty locating a studding in the wall when you want to hang a picture, just look at the baseboard and find where it's nailed to a studding. Hang your picture on a vertical line with that point.—*Mary A. Kelly, Nebraska.*

● Get extra service from your individual coffee carafes. When you make pancake or waffle syrup, pour it into a carafe, light the candle, and have warm syrup while you eat. You even can store what's left in the carafe. To reheat, simply place over the lighted candle.—*Mrs. Eileen Creiglow, Ohio.*

● Cut soap-filled kitchen scouring pads into four pieces with an old pair of scissors. Use 1 piece at a time. This prevents the entire pad from getting rusty.—*Mrs. A. R. Hanson, Nebraska.*

● To save freezer space, fit pieces of cut-up chicken in an ice-cube tray and freeze solid. Remove the "block" of chicken and slip it in a plastic bag or wrap in freezer paper. The neat square-cornered packages will fit compactly into a small area of your freezer.—*Miss Nancy Myers, Iowa.*

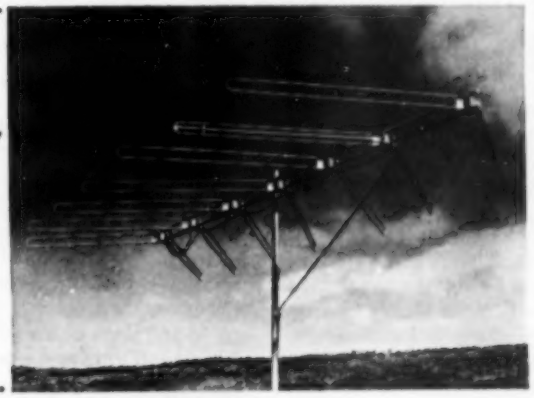
FREE! TV ANTENNA CHECKUP KIT

See if storm damage, old age or outdated antenna design are cheating you of the TV picture you paid for

ASK YOUR TV SERVICEMAN ABOUT THE NEW

CHANNEL MASTER T-W

—THE MOST POWERFUL, MOST DURABLE TV ANTENNA— FOR IMPROVED RECEPTION ON ALL CHANNELS EVEN IN DEEP-FRINGE AREAS



If you're not getting clear, sharp pictures on every channel (2 to 13), ask your TV serviceman about the new Channel Master T-W. Developed by Channel Master electronic research, the T-W is the first antenna to make use of the "Traveling Wave" principle, which electronically reinforces the picture signal on all channels. It eliminates "snow," "ghosts," and interference . . . brings in stations beyond the reach of old-fashioned antennas.

Perfect for color reception, too. The new Channel Master T-W offers exceptional resistance to wind and ice loading. All aluminum, double-strength "truss" construction means that you get many years of trouble-free reception. Available in three models—your TV serviceman will tell you which one is best for *your* reception needs.

Harold Harris, V P., Engineering & Research, Channel Master Corp.

"No TV set—old or new—can deliver a better picture than the signal fed to it by the antenna. TV antennas that have been up on the roof for as little as two years may be corroded, scientifically outdated or damaged by storm—causing 'snow,' 'ghosts,' or 'problem' stations. Our engineering staff has prepared a 'Checkup Kit,' including a 10-point check list, that will help you find out if *your* antenna is giving you the picture you paid for when you bought your TV set."

SEND FOR YOUR FREE KIT

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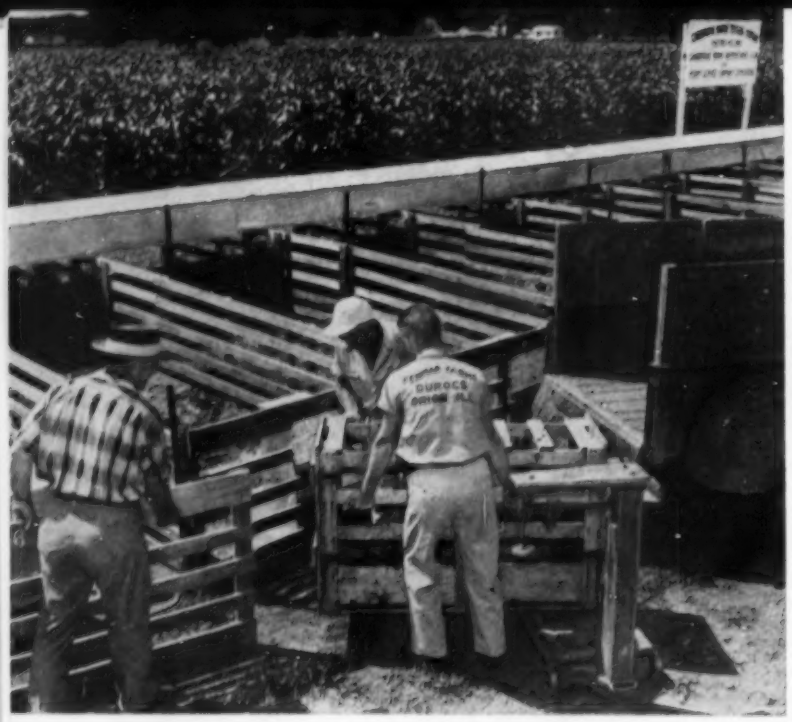

Swine-testing station of Cambridge Swine Improvement Association is the keystone of the Vocational Agriculture Department's sponsored program. Allan Utech (left), instructor and association secretary, assists Zed Hardin, president, and son Jerry (right) weigh in a pig

On-farm swine-testing program sponsored by Henry County Extension Service includes weighing of gilts at 5 to 6 months of age. William Wyffels (left), Geneseo, attaches hand scales between hog crate and manure scoop and uses tractor lift in weighing. Farm Adviser Darl Fike is assisting Wyffels weigh his hogs

Photographs: Pease

Two systems for testing hogs

Farmers in the nation's leading swine county are using two distinct programs—a testing station and an on-farm swine-testing program—to improve their hogs

By Mike Bay

This summer, the nation's leading swine-producing county put into practice a double-barreled swine-improvement program aimed at the consumer's wants—quality pork with less fat and a higher percentage of primal cuts.

One of the programs is sponsored by the Vocational Agriculture Department of the Cambridge, Illinois, High School and centers around a swine-testing station near there. The other, sponsored by the Henry County extension service, is an on-farm swine-testing program.

These livestock farmers, who depend on hogs for 50 percent of their income, term the on-farm testing program "simple, practical, and easy to follow." Developed by Farm Adviser Darl Fike and his Extension Livestock Committee, the system gets right at the problem of selecting breeding stock which has high productivity, ability to use feed efficiently and make gains rapidly, and yield a superior carcass.

This system, which requires a minimum of work, permits swine producers to keep the meat-type individuals in their herds for breeding purposes.

This program, called the "Henry County Swine Improvement Project," has 3 important phases. First, all the gilts in the large litters from good sows are earmarked. Each litter is given a separate number. Fike suggests that farmers earmark about one-third more gilts than needed for breeding stock. Farrowing date for each litter is recorded.

Secondly, the ear-notched gilts in each litter are weighed and probed at 5 to 6 months of age. Probe measurements are adjusted to a 200-pound live weight, and weights are corrected to a 180-day basis. This information provides the basis for selecting the best gilts. At present, their acceptable standards are 200 pounds gain in 180 days or less; 1.5 inches back fat or less for a 200-pound gilt; and a minimum of 12 teats.

Thirdly, the program recommends the use of a meat-type boar that has performance records if possible. Acceptable standards are 200 pounds gain in 180 days and 1.3 inches back fat or less for a 200-pound boar.

Under this program members keep their own records. Members of the extension staff assist the farmers in probing the pigs to obtain back-fat measurements. Also, the farm adviser furnishes the 50 swine-producer members with a special kit containing ear-notching system, weight-correction table, probe-correction table, and work sheets.

The other program in Henry County is composed largely of purebred breeders organized as the Cambridge Swine Improvement [*Turn to page 182*

DYNAFAC

URGENT NEWS FOR DAIRYMEN -- DYNAFAC, ARMOUR'S NEW CHEMOBIOTIC FEED ADDITIVE CONTROLS HARMFUL BACTERIA WITHOUT DESTROYING THE BENEFICIAL ORGANISMS IN THE PAUNCH. DYNAFAC BUILDS A HUSKIER, HEALTHIER CALF FOR QUALITY REPLACEMENTS.

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Dynafac is now available in branded feeds and pre-mixes. Look for it by the name tetra alkylammonium stearate (Dynafac*) on the feed tag—or ask your feed man about it. Armour and Company, Union Stock Yards, Chicago.

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Testing hogs

From page 180

Association. Sponsored by the local vocational agriculture department, this program hinges on a swine-testing station located on the Lloyd Roach farm near the junction of Highways 81 and 82.

Each participating member assigns 2 pigs—a boar and a barrow—from each litter. The pigs are brought to the station at 56 to 58 days of age and weighed at 65 days of age at which time they are put on test. They remain at the station until they weigh 200 to 214 pounds or until 180 days of age. The station has individual pens for 30 hogs.

At the station, pigs are all fed the same ration—a pelleted commercial corn-supplement in self-feeders. Each month accurate records are kept of the amount of feed each pig consumes and the amount he gains. Each pig is weighed once a month. At the end of the testing period, figures are compiled giving the amount of feed consumed, the rate of gain, and the feed-conversion rate.

The barrows consigned by association's members were slaughtered and carcasses measured for length, thickness of back fat, area of loin eye, and the percentage of prime cuts. The boars were probed for back-fat thickness.

An active member of the association is entitled to enter one or more litters having a litter size of 8 or more pigs. Additional litters up to a maximum of 16 were allotted among the association's members on a pro-rata basis.

Association members set up the station and own it. Some help was provided by members of the Cambridge High School vocational agriculture class.

Allan Utech, vocational agriculture instructor and association secretary, points out that this program is a big part of his department's adult-education program. "The department believes farmers will get a better price for their products by improving quality," he says.

The purpose of the program, says Utech, is to assist in the production and marketing of efficient meat-type swine-breeding stock. The association's program should provide the kind of information that will help the purebred breeder develop a better type hog for present day demands. Also, this program should provide the commercial hog producer with a source of good breeding stock.

There is little doubt that the hog industry can recapture consumer demands for quality pork with less fat through increased production of meat-type hogs, Utech says.

The Henry Service Company is cooperating in the project by furnishing the land, fencing, and other material. A caretaker, Fred Landell, in charge of the feeding operation, keeps records on all the pigs at the station. Membership in the association is open to any swine producer in the county, says the group's president, Zed Hardin of Orion.

Lean lamb needed, too

"The beef producer and the hog producer are both adapting to the demand for leaner carcasses with better fat distribution, and the sheep producer can, too." So indicated George H. Hart, dean emeritus of the California School of Veterinary Medicine, following a trip to Australia.

He pointed out that Australian results show it is now possible to produce a lamb with a fat distribution more attractive to the housewife.

The time of heavy feeding is important to the type of carcass, he said. During the early stages the bones developed most, then the muscle, and finally the fat. The practice of feeding heavily in the finishing stage produces a fat carcass. Feeding at an earlier stage will develop a lean meat with a good marbling of fat. The fat-development stage is the time to cut down on the diet.

Haymaker

Why you say it

As early as the Fifteenth Century, any rural workman who gained a reputation with the scythe was likely to be called a "haymaker." Since he repeated a few sets of motions over and over, all day long, it was easy to mimic his actions. So there developed the "haymaker's jig," a rural game or folk dance in which the workman's gestures were imitated.

Influenced by the dance, it later became customary to call a violent blow by a boxer a "haymaker." Folk of good breeding never used the term, of course. It might have survived only among professional fighters had it not been for the rise of radio.

Fight announcers in the 1920s dug up all the colorful, old boxing expressions they could find, used them in broadcasts. Given new prominence in this fashion, *haymaker* came to stand for any blow good for a knockout—whether in the boxing ring or in a verbal bout around a conference table.—*Boyd G. Wood.*

Drawing: Hiser

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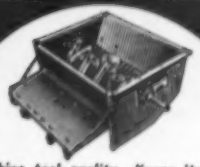

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STRAW CHOPPER

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By Joe Clay

Lashing rain and burning sun can sap the protein and feeding value from your hay. The threat of fire from poorly dried hay hangs over your barn . . . menacing feed, stock and property. These dangers could destroy your crop, leave you without hay. End the threat of crop loss and fire once and for all. Cure-in-Mow, with a Clay Crop Drier and put up better, leafier, higher quality hay without danger of loss.

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Good beef bulls

From page 69

organization collects the semen at the farm or ranch, processes and freezes the semen at the laboratory, and sends regular shipment to the herd owner.

In some instances, the semen is stored at the laboratory and the organization's fieldmen service the owner's cows on call.

Strange as it may seem, the Northern Ohio Breeders' Cooperative Association reports that 85 percent of their beef bull semen services marginal dairy cows. For the most part, the dairymen fall into three classes. One group screens out their low-producing cows on the basis of production records or observation, and breeds these to a beef bull.

A second group breeds heifers to a beef bull, as they make a practice of basing their replacement heifer selection on production records and some believe that a heifer has less trouble calving when bred to a beef bull.

The third group is usually former Grade-B milk producers who are approaching or have reached retirement age, are tired of milking, and are not interested in equipping themselves for Grade-A production. They market their steer calves and breed back their heifers. In this way, they hope to eventually change over to a small beef operation.

One of the problems associated with the artificial insemination of beef cattle is locating and holding cows in heat for breeding. And the problem becomes more acute under range conditions. The Herschede Ranch of Hereford, Arizona, has artificially inseminated 350 cows during the past 18 months with a 65- to 70-percent first-service conception rate. They see their open cows at least 3 times a day during their 3 breeding periods. When an animal is in heat, she is brought into the breeding corral and inseminated at the proper time.

They do all their own collecting, processing, and freezing of semen as well as inseminating. They claim the advantage of being able to breed many more cows in a given period than they could with natural service. For show purposes, they try to have the calves arrive as close to January 1, September 1, and between April 1 and May 1 as possible.

Dairyman R. L. Sigler, Tiffin, Ohio, breeds low-producing cows—less than 400 pounds butterfat—to beef bulls. His white-face calves sell for about $5 more per head

The only disadvantage, says N. F. Herschede, is a little more time in preparing the semen and driving 50 miles once a week for dry ice. When mechanical refrigeration is a little more stable and repair service is better, the chore of going for dry ice will be eliminated.

The problem of locating and holding cows in heat is a tough one even in a registered herd, reports the Double L Hereford Ranch, Encinitas, California. "We have a cycle on each cow and watch her particularly when she is due in. Cows are run close up and checked 3 times a day."

The Double L Ranch uses its own bulls and the ranch foreman does the inseminating, using both frozen and liquid semen. First-service conception rate has been between 40 and 50 percent.

Another reason for more beef cows not being artificially inseminated is a ruling adopted by every beef registry association in the United States requiring the owner of the sire and the dam to be the same, says Dr. Herman of the National Association of Artificial Breeders. Some registry associations permit a sire used for artificial service to be owned by three persons. Other associations permit a four-way ownership.

In contrast, the dairy breeds and the Milking Shorthorn Association permit insemination of the cow and registration of resulting offspring if provisions with reference to identity of semen, identification of cow at time of insemination, and careful record keeping and reporting are met.

Under this program there are 90 recognized artificial breeding organizations in the United States which can maintain registered sires and inseminate cattle in thousands of herds to one sire and register the calves from registered cattle.

Likewise, the registry associations of the dairy breeds and the Milking Shorthorn breed permit the continued use of the frozen semen on hand at the time of sire's death. The number of ampules of such semen is declared with the breed registry association at the time of the sire's death. The beef breeds rather universally require that "the semen in storage die when the bull dies," says Dr. Herman.

"Just once I'd like to see the car come home empty and the gas tank full"

And as the artificial breeding organizations continue to make bull semen more available, these restrictions on registration affect more and more breeders. For instance, United Breeders of Texas, Inc., representing 3 Midwestern breeding associations, has 50 technicians servicing cattle for breeders in Texas and eastern New Mexico. This organization does not own a bull. It buys and distributes frozen semen. A frozen semen bank of 15,000 ampules from approximately 185 bulls from 9 different beef and dairy breeds is maintained at Tyler, Texas.

Even in this thinly populated cattle area, breeders have access to top-notch bulls for the basic price of $7 per first service within a 10-mile radius of the technician's home. "An additional charge must be made to compensate for the extra miles and loss of time," says Manager J. Warren Nordyke. "In some areas technicians serve herds as far as 30 miles from their homes."

In Canada, the percentage of inseminations using beef semen is about a third of the total. All of the beef registry associations in Canada except Herefords permit registration of calves resulting from artificial insemination.

Rod Snyder, manager of the Waterloo Cattle Breeding Association, Waterloo, Ontario, Canada, says, "Most of our beef breedings are in small herds. These men could not possibly own their own bulls when they can get their cows artificially inseminated for $5.

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Double-use machine shed

By B. G. Thrailkill

Machine shed with high roof normally would result in waste space above stored machinery. Now with floor built 12′ above ground level, there's room for an area 8′ high, in center, for poultry. Building is double-duty

Poultry floor joists are of 2x10 lumber, bolted to the laminated arch rafters. Further strength was acquired by dropping double 5/8″ rods from the ridgepole. Floor boards are tongue and groove. Litter is corncobs

Poultry house and machine shed, all in one big, new building—that's what the Clarence Andersons have on the 320-acre farm they rent near Zearing, Iowa.

Anderson realized the machine shed, built of laminated rafters with Gothic arch, would have a lot of waste ceiling space and he got the idea of putting in a floor and using the upper part for poultry.

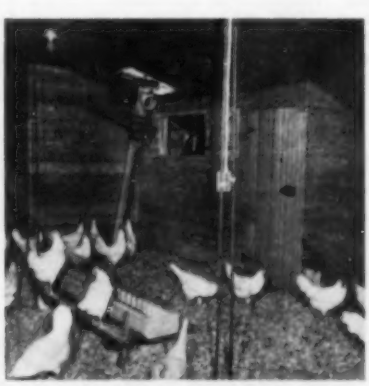
The poultry section is fully insulated, automatically ventilated, has automatic watering troughs and a built-in hopper, and electrically operated auger for elevating feed into bins on the poultry room floor.

The stairway to the poultry floor is reached through a 16′x30′ area of the machine shed which Anderson plans to equip as his workshop.

Supplying litter for the poultry house is no problem. Anderson crushes cobs after his corn is shelled and blows the cobs into the poultry section through a door at the south end of the building.

Photographs: Author

To elevate feed to the feed bin adjacent to the poultry area, Anderson uses an unloading wagon to dump directly into the hopper shown above. Motor-driven auger extends through floor to bin (right photograph)



Poultry area has automatic lighting system, 3 thermostats to control fans, 8 air intakes between rafters on each side of the building, and 5 exhaust fans. The stairway to the area is reached through future workshop area

Making the most of MECHANIZED FARMING

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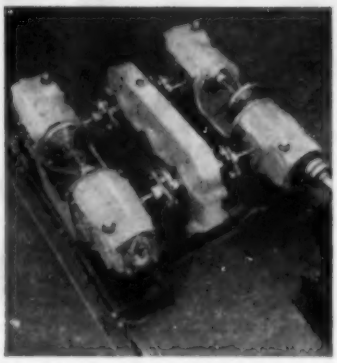

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A Midwest farmer removed the scoop from his tractor-mounted manure loader and replaced it with a cross-arm of steel pipe. The cross-arm engages lugs bolted to the rear under-chassis of the wagon. When the wagon is raised, the corn spills into the elevator bin quickly and easily, saving the time and labor of unloading by hand.

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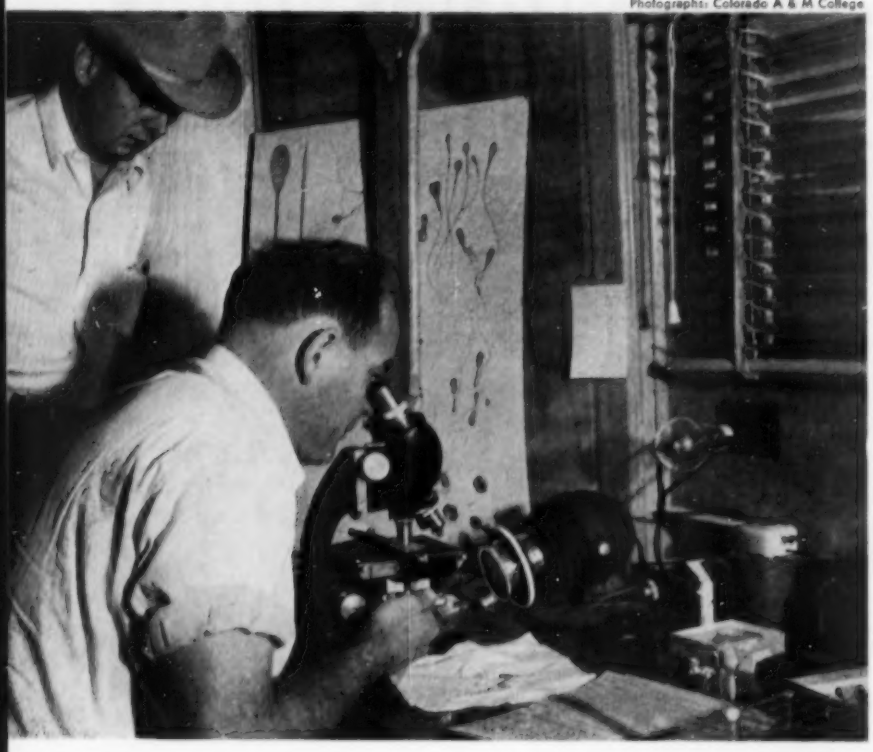
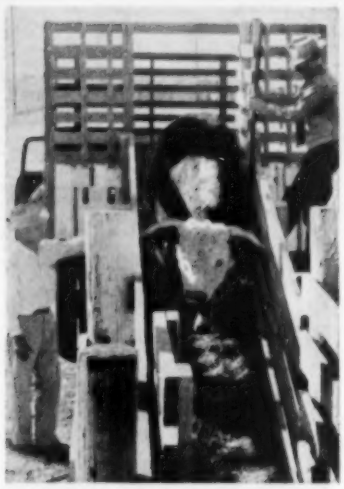
Photographs: Colorado A & M College



Semen samples are taken inside the mobile lab and checked under a microscope. Veterinarians check for percent of dead and live sperm. They also make a sperm count and check for color, volume, and the pH of each semen sample.

A summary of these factors aids in determining a bull's breeding ability.

Final classification of a bull's breeding ability comes after semen evaluation, a physical examination, and an evaluation and interpretation of the bull's breeding history. Bull is classified as a satisfactory or unsatisfactory potential breeder.



Is this bull worth keeping? His owners will know within a few minutes whether he is a good or poor breeder. He was trucked from a Colorado ranch to central location where mobile lab was set up. Lab also operates on individual ranches

Testing— not guessing— bull fertility

By Lowell Watts

Examination of bulls for breeding ability is playing an important part in Colorado's beef production program.

Two years ago, a mobile bull-testing laboratory was put into operation by Colorado A & M College. Two thousand bulls in all parts of the state have been tested for breeding ability since that time. Object of the work is to cull out those bulls who have poor breeding potential, and thereby cut down on feed costs and increase calf crop chances.

The testing laboratory is a self-sufficient unit with its own power plant, water storage tank, water heater, and pressure system. Necessary laboratory equipment is also included. Semen is collected with an electronic ejaculator.

With better techniques has come speeded-up service. The lab crew can now test from 20 to 35 bulls per day.

County agents and local cattlemen's associations play a major role in the [*Turn to page 190*

Mobile bull-testing lab, owned and operated by Colorado A & M, is a complete and self-sufficient unit for field operations. Containing its own power plant, pressure system, water storage tank, and hot water system, it has been used to test 2,000 bulls for breeding ability the past 2 years. From 20 to 35 bulls can be tested per day

Thousands of farmers are switching to

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Granular 12-12-12 is one of the fastest-growing fertilizers in the history of commercial plant foods. Each year, more and more thousands of farmers switch to this modern fertilizer for modern, high-yielding crops.

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• With 12% nitrogen, 12% phosphoric acid and 12% potash, granular, free-flowing, easy-drilling 12-12-12 is balanced for big yields. And it has other labor-saving and money-making advantages . . . lower freight rates per unit of plant food . . . fewer bags to haul and handle . . . and fewer trips across your field per pound of plant food put in your soil.

It will pay you to switch to granular 12-12-12—the modern fertilizer that's made to make crops make money. See your fertilizer dealer! Tell him you want balanced, concentrated, high-nitrogen, granular 12-12-12 fertilizer to make 1957 a better year for you!

The fertilizer industry serves the farmer. Nitrogen Division serves the fertilizer industry as America's leading producer of nitrogen, the growth element in mixed fertilizers.

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Cedar Rapids, Iowa

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Dept. 114-B

Testing bull fertility

From page 188

service. They contact Colorado A & M's Dr. Lloyd Faulkner, who is in charge of the mobile laboratory, when sufficient numbers of stockmen in a given area want the service to warrant a trip by the testing laboratory.

They usually arrange for some central location for parking the trailer where chutes and corrals are available. Fairgrounds, with their corrals and loading chutes, initially proved good spots for the lab. Today, with its newer equipment, the laboratory can operate on individual ranches where less equipment and fewer facilities are available.

An important phase of the bull testing is a complete physical examination given each bull. Veterinarians working on the testing program consider this exam equally as important as examination of the semen. The "physical" may turn up clues as to why a good-looking bull turns out to be a poor breeder.

Semen is then collected, taken inside the laboratory, and examined closely under a microscope. It is checked for percent and rate of mobility of sperm in the raw semen. A veterinarian also notes the color, volume, and pH. Using a colorimeter, he then makes a sperm count. A stained slide is used to determine the percent of dead and live sperm. A summary of these factors helps the veterinarian determine the bull's breeding ability.

Final classification of a bull's breeding ability comes only after semen evaluation, the physical examination, and an evaluation and interpretation of the bull's breeding history, if information is available. After the data is evaluated, the veterinarian classifies the bull as a satisfactory or unsatisfactory potential breeder.

Stockmen naturally will ask, "How reliable is the classification of a bull's breeding ability?" Dr. Harold Hill, in charge of the entire bull-testing program at Colorado A & M, has this answer. "Bull semen is carefully examined, using the more common criteria known to be related to capacity for fertilization. Those bulls whose semen rates 'unsatisfactory'

"Have you noticed how much more leisure time we have since we put in the automatic milkers?"

according to these criteria are classified as unsatisfactory breeders.

"Semen quality of bulls at the top of the breeding scale is subject to more variation than is semen from bulls classified as unsatisfactory breeders. Bulls whose semen fits at the bottom of the scale usually remain in that category for 6 months, a year, or even for their entire lives. Spontaneous recovery of these bulls seldom occurs.

"To find these low-efficiency breeders we must examine all bulls, because there is no known way to spot a bull that is a breeding 'dud' merely by looking at him."

Doctor Hill is careful to point out that the tests give no indication of the bull's ability to reproduce desirable characteristics in his calves. They are designed solely to determine his capacity to "settle" cows in the breeding herd.

About 12 percent of all the bulls tested during the past 2 years the mobile lab has been in operation, have rated unsatisfactory. The tests also indicate that bulls less than 2 years old rate low because they have not reached breeding maturity. "These same figures indicate that a bull should be at least 2 years old before he is tested," Hill says. "Bulls in the 3- to 8-year age bracket showed up best in the tests, but even in this age category, we find a good many 'dud' bulls."

Here is a summary of Colorado A & M bull-testing program (1956):

Age	Satisfactory—%	Unsatisfactory—%	Bulls tested
12–15 months	79	21	87
15 months–2 years	79	21	163
2–3 years	88	12	181
3–5 years	93	7	329
5–8 years	89	11	162
8–11 years	82	18	28
Average % of total	88	12	950

Air leaks give milk bad taste

Beware of air leaks in pipeline milkers. They can cause a bad taste in milk.

Two Michigan State University researchers, Louis Jokay and J. M. Jensen, said they found in their study of pipeline milkers that leaky valves cause acid to form in milk, giving it a bad taste.

They also found that extremely long pipelines with many risers caused churning and rancid milk.

The researchers concluded that stanchion lines in large barns could be made to produce excellent quality milk by stopping air leaks, reducing the height of risers and the length and slope of the line.

When lines are too long, a valve can be installed at the mid-point of the continuous pipe so the milk will be drawn from only the mid-point to the milkroom.

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If you want shade in a hurry, yet want a tree that is hardy, long-lived and hard-wooded, Henry Field's Hybrid Elm is the tree for you. It grows faster than any other tree in the United States, bar none—even faster than the soft-wooded, short-lived poplar. It combines the permanence and beauty of the American Elm with the rapid growth of the Chinese Elm; has all the good points of both, but none of the bad.

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Henry Field's Hybrid Elm thrives in any type soil, and keeps right on growing in weather hot or cold, wet or dry. The leaves are large and dark green; the branches straight and strong, with great resistance to breakage from high winds, ice and snow.

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And apparently Henry Field's Hybrid Elm is immune to elm diseases. We have sold several hundred thousand during the past ten years, and to date know of not one case of loss from the elm diseases.

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Many City Park Commissions that have prohibited the planting of vulnerable common elms enthusiastically approve the planting of Henry Field's Hybrid Elm.

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Due to limited production and heavy demand, we are compelled to limit orders to 6 trees per individual. City Park Commissions and Institutions planning beautification programs will be given special consideration if they order on letterhead.

A typical example of a Henry Field Hybrid Elm

Susan was 3 when this Henry Field Hybrid Elm was planted. When she was 5, the tree was over 25 feet tall!

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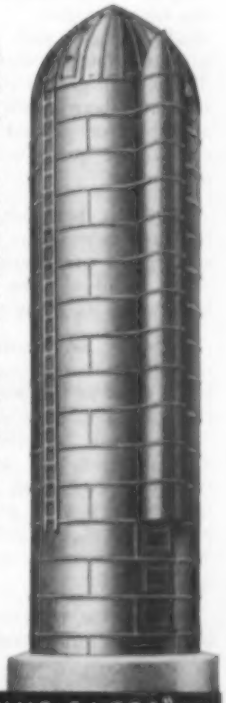

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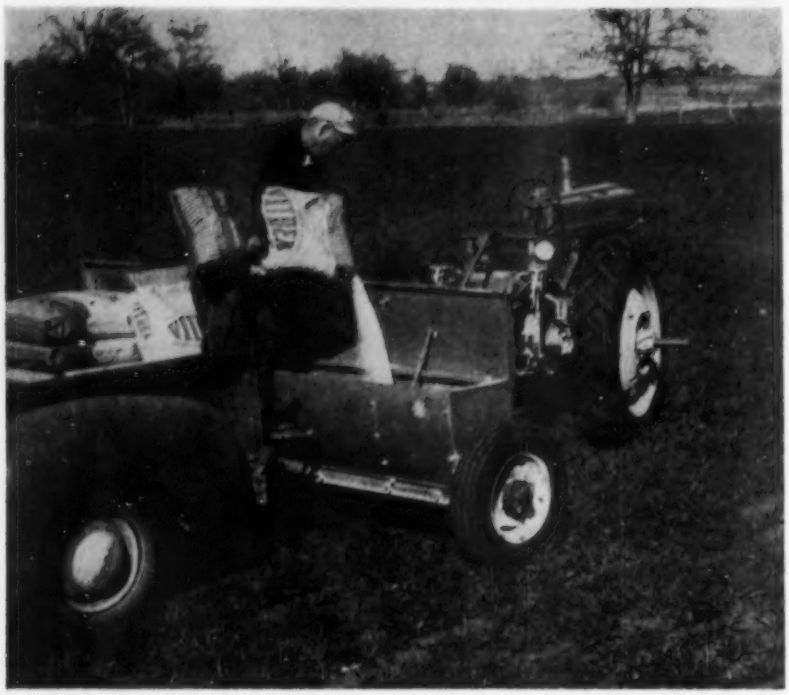

WHY MORE FARMERS WILL TOP DRESS AND PLOW DOWN UREA NITROGEN THIS YEAR . . .

As late as two or three years ago, urea nitrogen, due to limited supply, was considered almost a luxury type nitrogen . at a price only truck farmers and other intensive growers thought they could afford. Today, with greatly expanded production, this premium 45% nitrogen is available for general crop use at a competitive price with other forms of nitrogen.

This year thousands of farmers will use urea nitrogen as a top dress for small grain and pasture or as a plow-down ahead of corn or other crops because of its many advantages.

Urea is a long-lasting organic form of nitrogen that gives the crop a good boost right at the start and yet continues feeding it as it grows to maturity. Then, too, fertilizer urea is 45% nitrogen, the most labor-saving nitrogen ever bagged. And since urea is a non-corrosive, conveniently applied form of nitrogen, it cuts down on the expense of applicator equipment.

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Write for a free sample of VITREA, literature and a nitrogen calculator which quickly tells the amount of different nitrogen fertilizers required at various recommended nitrogen rates. Grand River Chemical Division of Deere & Company, Dept. S, Pryor, Oklahoma.

Veterinary

Bloody urine may indicate leptospirosis

If your cows are passing bloody urine, it might be well to have the herd checked for leptospirosis. Voiding of bloody urine is the first symptom of this disease in about 50 percent of all cases reported to the veterinary profession.

Malignant edema caused by protruding nails

The other day we visited a farm where several of the larger shoats had died during the past two months. The entire herd would go along all right for a few days, and then one of the biggest animals would either be found dead or dying.

Some kind of a contagious disease was suspected at first. However, investigation showed the deaths were due to malignant edema. This was traced back to wounds inflicted by a protruding nail in a hog-house door, making the infection possible. Losses were stopped by removing the nail.

Lamps caused pigs to lose their tails

Recently an owner complained that a number of his baby pigs were losing their tails about a half inch from the body. The pigs had normal tails when born, but they developed a scabby ring and dropped off about a week after birth. He was a little afraid of erysipelas, but a checkup showed that trouble was due to having the infrared lamps located too close to the pigs.

Dip pigs for lice and mange when vaccinating

Small pigs can be dipped for protection against lice and mange mites without much extra work at vaccination or castrating time. Use a small vat or tub containing a suitable benzene hexachloride

helps

solution. Place the container outside the pen gate or fence. When the pigs are released, place them in the dip with their backs down. They will promptly roll over and then climb out completely treated.

Sheep tick killer

Entomologists at the Wyoming University Experiment Station report that one thorough dusting with 1½ percent dieldrin right after shearing will rid sheep of ticks. Effectiveness of this treatment is due to the fact that dieldrin not only kills the ticks, but stays in the wool long enough to kill young ticks as they hatch later.

The use of a power duster at the end of a chute is the easiest way to treat sheep. From 2,000 to 3,000 can be dusted hourly by this method.

Steps on ramp make livestock loading easier

The University of Massachusetts is recommending a new type of livestock loading ramp which lessens trouble with slipping and bruising. It is a portable "step-up" affair that looks much like the ramps used for loading passengers on airliners. The steps are about 15 inches wide and 3 inches high.

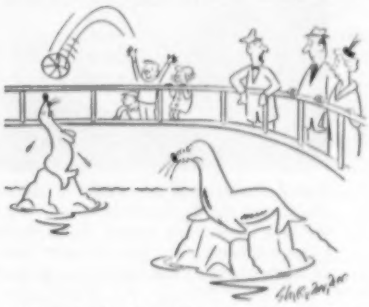
Animals are apparently more sure of themselves if they can climb in flat-footed fashion rather than on a slant, even though cleats are furnished at regular intervals on the slope.

Swine may react falsely to brucellosis test

Testing hogs for brucellosis is made somewhat more difficult by an unknown substance, present in the blood of some swine. This substance may cause swine to give a false "positive" reaction to the standard agglutination test used to diagnose the disease.

Co-operating federal-state scientists are convinced that a single test does not provide sufficient proof of the presence or absence of brucellosis in many swine herds.

When positive reactors are found in the first test performed on a breeding herd, at least 2 or more tests should be made as a basis for final diagnosis, the researchers report. If the potency of the reaction has not significantly increased in following tests, as compared with the first test, no infection would be suspected. On the other hand, where 30 percent of the hogs show complete reaction at high levels and the remainder react to lower levels on the first herd test, brucellosis infection is undoubtedly present.



"Somebody threw him a bowling ball."

Force-fed salt to lambs prevents urinary calculi

Though it may not be the complete answer, force-feeding salt to lambs is the most promising remedy for urinary calculi, Dr. T. D. Bell of Kansas State College believes.

After having trouble with urinary calculi in experimental lambs last fall, Doctor Bell included about 5 percent salt in creep rations of the lambs—and lost no more of the lambs.

In tests at the State College of Washington, adding 10 percent salt to the diet of 30 experimental wethers prevented urinary calculi. Washington workers think perhaps 5 percent salt might be as beneficial in preventing urinary calculi as the larger amount.

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The following stores, in cooperation with *Successful Farming*, will be happy to help you plan, equip, and decorate your kitchen. These stores will serve as authorized "*Successful Farming* Kitchen Ideas Centers." For ideas to get you started they are showing *Successful Farming's* colorful, new filmstrip, "Planning Your Farm Kitchen." Contact the store nearest you and watch your local newspaper for dates and times of filmstrip showings.

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Champaign .... Colbert's Kitchens
Highland ..... Roland Harris Furniture

Indiana

Evansville ..... Harrell Building Supplies
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Noblesville ..... W. Hare & Son
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Cedar Rapids .. Smulekoff's
Charles City .... Andersen Furniture
Dubuque ..... Roshek Brothers Co.
Marshalltown .. McGregor Co.
Oelwein ..... Young's
Waterloo ..... Black's

Kansas

Topeka ..... Ed Marling Stores

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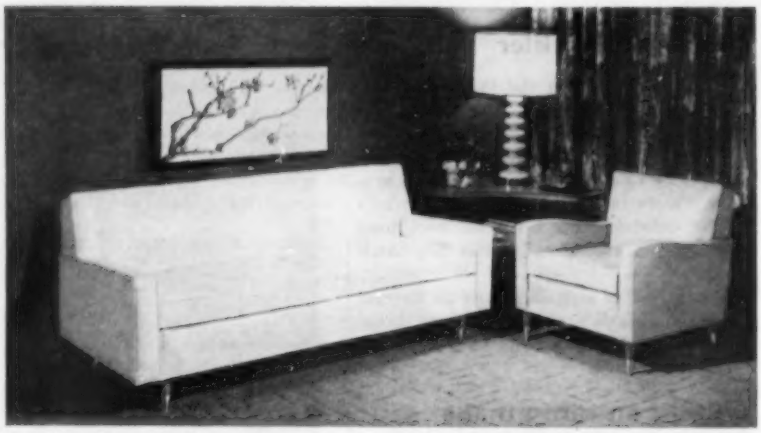
Good buys for few dollars

Good design does not depend on how much an item costs. You can find pieces of furniture that are well constructed and well designed . . . yet priced within your budget



Good design with plastic. This couch and chair meet the demands of farm living and are very reasonably priced. The upholstery fabric is a plastic that has the warm, soft feel of leather and at the same time is durable and easy to keep clean. Here's an opportunity to go into a white or a pastel shade that might be impractical on a chair or couch of another type fabric. The timeless design will assure you of years of service

Photographs: Hedrich-Blessing

Good design with metal, upholstery. This sectional is a combination of materials that gives you good styling at low cost.

If your furnishings budget is limited, consider a grouping such as this for your living room, later move it to the family room. This particular sectional comes in a plastic upholstery that is decorative and practical.

←

Good design—Scandinavian flavor. The simple, clean lines of the table and chairs combine to give this dining-room set a graceful elegance that reflects the popular Scandinavian influence. The wood, walnut, has been polished so the rich-looking natural grain is a prominent feature.

Furniture with good design is equally at home in a Modern or Traditional room.

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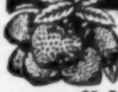

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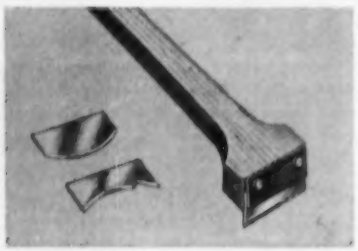
By attaching canvas pieces securely to each side of the chute, I have found it is much easier to load or unload livestock. Other material to cover the open spaces will work equally as well. This makes it impossible for the animals to see out and become excited by anything on the outside of the loading chute.—*W. E. K., Nebraska.*

Sections of old hacksaw blades are very good for scraping doors, windows, and frames. I break the blades into



sections and carefully grind them to fit contours of moldings and wood shapes. Sections can be readily changed in a wooden handle, as shown above. —*A. W. S., Minnesota.*

To reduce waste of salt blocks of the type having a hole in the middle, I mount each one on an empty nail keg anchored with a projecting length of pipe. The pipe is pushed through a hole drilled in the bottom of the upturned keg and driven into the ground. The salt block then is slipped over the pipe to rest on the keg.

Being off the ground, the salt will not dissolve from soil moisture, nor become muddy.—*D. W., South Dakota.*

Soldering jobs are much easier on horizontal surfaces than on those in a vertical position. To make this possible, I set up the work in a suitable C clamp which in turn can be held solidly with a bench vise in any position desired.—*E. W., Illinois.*

For reducing annoying vibration of a tractor hood, I coat the underside with auto body deadener, or "undercoating." This is both inexpensive and effective.—*F. S., Illinois.*

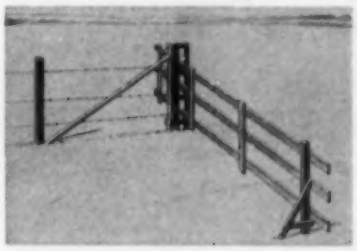
Stapling a wire to laying nests as is shown in drawing above makes it impossible for hens to roost on the front. However, it doesn't prevent their entering the nest to lay.—*D. F., North Dakota.*

The revolving bolt bin shown in drawing below, was made from a discarded disc. I have found it very useful and far more valuable than the junk price the discarded disc might have brought. I anchored the lower end into a roller bearing, also from junked machinery, and secured the top end in another bearing. The entire unit was then anchored to nearby wall, close to a workbench.—*D. O., Arkansas.*

To reduce fire hazard from the electric lamps in our haymow wherever dust or chaff may be likely, I have housed lamp globes in ordinary clear glass fruit jars. I simply cut a hole in the jar lid just large enough to screw the lamp base through.

A cover over the top of the metal jar lid may be made of asbestos paper. The jar is screwed into the jar top. Surfaces exposed to dust are then cool enough to reduce fire hazard to a minimum.—*J. R., Minnesota.*

Where I have slide gates rather than hinged ones as shown in drawing, I have set a brace at the free end of the



gate so the opened gate will stand upright. As a rule, this makes it much easier to herd stock through the opened gate.—*H. C., Minnesota.*

Our old stock tank started leaking beyond repair so I placed a slightly smaller tank in it, connected pipes for water supply and overflow, and filled the space between the tanks with some good insulating material.

Then I covered the open space between rims to prevent entrance of water. Because of the insulation, the water remains warm much longer after heating in winter, and is cooler in the summer.—*L. K., Iowa.*

To cement down asphalt shingles, I apply liquid roofing cement under shingles with a calking gun. I replace the tip of the calking gun with a 10″ length of copper tubing, flattened on the end. A few squirts with the trigger deposits the cement in a band under raised shingles so they will stay down when put in place.—*J. E. L., Wisconsin.*

Successful Farming invites you to share your ideas with the rest of our readers. We pay $5 for each item upon publication, but regret we cannot return those we don't use.—The Editors

Nation's Farmers report on 1956 corn yields

WET OR DRY, American farmers have the "knack" of producing good, high yields of corn. Although drought did hurt corn yields in some areas, 5442 contestants from 33 states and Canada, averaged 112.45 bushels per acre in the 1956 National DeKalb Selected 5-Acre Corn Growing Contest.

"STAKING A CLAIM" in Colorado for a National Corn Growing Championship isn't a simple matter, but Carl Palizzi of Brighton, assisted by irrigation, got the job done. Palizzi, the third Colorado farmer to win DeKalb's National Selected 5-Acre Corn Growing Contest, produced a phenomenal yield of 219.43 bushels per acre.

WITH 96 OF 99 IOWA Counties represented, the average of 570 Iowa farmers in the '56 contest was 121.01 bushels. And weather conditions varied greatly, too.

5442 Farmers from 33 states and Canada report yields which average 112.45 bu. per acre

OLD-TIMERS REMEMBER WELL the name "John Byson." Way back in 1938, this Algona, Iowa farmer won first DEKALB CORN KING TITLE by producing 178.26 bushels per acre on his Selected 5-Acre contest plot.

IT TAKES MORE THAN "LUCK" when so many DeKalb "Champs" average 148.02 bushels of corn per acre, as they did in the 1956 Selected 5-acre DeKalb Corn Growing Contest. It takes GOOD FARMING plus GOOD SEED CORN. It takes corn that STANDS . . . MATURES . . . YIELDS. Is it any wonder MORE Farmers have planted DEKALB for 17 straight years than any other seed corn.

Figures show average state yields of all contestants

FIVE ACRES, 1,051 BUSHELS of corn is the accomplishment of last year's champion team from Alvada, Ohio. Herbert Roark and Paul Newcomer averaged 210.36 bus.

APPROXIMATELY 68,000 good farmers in the U.S. & Canada have participated in DeKalb Selected 5-Acre Corn Growing Contests during the last 18 years. Imagine this big army of farmers averaging around 100 bushels of corn to the acre throughout this nearly two decades . . . a tribute to careful planning, field management and careful selection of good DeKalb Seed Corn varieties.

All yields were made on selected 5-acre Contest Plots

NORTH OF THE BORDER you'll find profit-boosting yields of DeKalb Corn, too. This year's Canadian Corn Growing Champ was Roland Belanger, Chatham, Ont., who had a yield of 130.62 bushels per acre.

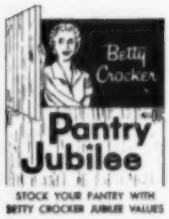
FROM BORDER TO BORDER and coast to coast, you'll find farmers who depend upon well-adapted DeKalb Corn varieties to "come through" for them year after year. To determine what kind of corn yields farmers of your area can obtain with DeKalb's adapted varieties, check the informative map above, showing average state yields in the '56 contest.

DEKALB AGRICULTURAL ASSN., INC.

Commercial Producers & Distributors of DeKalb Seed Corn, DeKalb Chix & DeKalb Hybrid Sorghum.

DEKALB, ILLINOIS

Gold Medal — the "flower of the wheat" makes a flower of a pie



SUNDAY CHICKEN PIE— a quick and easy recipe for an old-time, flaky-crusted, all-chicken treat that could *only* be a "homemade." Just be sure you bake the crust and make the sauce with Gold Medal. It's the very best – the "flower" of the wheat – to help you make *everything* better.

PASTRY	FILLING	
1 cup sifted GOLD MEDAL Flour	6 tbsp. chicken fat or butter	1-3/4 cups chicken broth
1/2 tsp. salt	6 tbsp. GOLD MEDAL Flour	2/3 cup cream or rich milk
1/3 cup shortening	1/2 tsp. salt	2 cups cut-up cooked chicken
2 tbsp. water	1/4 tsp. pepper	1/4 cup cut-up pimiento

FOR PASTRY: Make pastry, following standard method. Roll out to fit top of 1-1/2-qt. baking dish. Divide, prick, and fold back as illustrated. Bake *8 to 10 min. at 475°* on baking sheet. **FOR FILLING:** Make a white sauce using first 6 ingredients. Add chicken and pimiento. Pour into baking dish. Top with baked pastry. Bake *5 to 10 min. at 350°*, until hot and bubbly. *6 servings.*

General Mills

Gold MEDAL

THE "Kitchen-tested" FLOUR

Bake it Better WITH Gold Medal